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23 September 1977 Every Friday 35p

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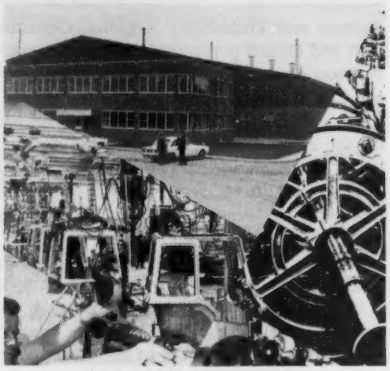
Trade and Industry

23 September 1977

News from the Departments of Industry·Trade·Prices & Consumer Protection



Among evidence submitted by the Department of Industry to the Wilson committee to review the functioning of financial institutions are details of government schemes of assistance for industry. The DoI paper 'Government Support for Industry' is published in *Trade and Industry* this week.

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Trade and Industry this week

HOME

PM launches small firms aid study

Prime Minister, James Callaghan, has asked the Chancellor of the Duchy of Lancaster, Harold Lever, to make a special study of the problems facing small firms and to see what more can be done to help them. He will be helped in his study by Bob Cryer, Parliamentary Under-Secretary of State for Industry, who already has special responsibility for small firms.

Mr Lever will draw together the work that has been going on in various Whitehall departments and will examine the effectiveness of the steps which the government has taken over the past two years.

This special study which Mr Lever, as a member of the Cabinet, has been asked to carry out is part of the government's recognition of the value of small firms to the future of the country.

Transport policy in context of industrial strategy

Speaking to delegates at the commercial motor fleet management conference in London on 21 September, Les Huckfield, Parliamentary Under-Secretary of State, Department of Industry, said it remained the government's intention to extend public ownership in road freight transport. But there would be no radical change in the organisation of existing public sector transport industries. Commenting on the government's white paper on transport policy and the continuing review of that policy, he said the white paper recognised that the transport industry needed financial and organisational stability. A major aim of the white paper had been the contribution of transport policy to the industrial strategy.

Mr. Huckfield said there would be selective assistance where the need was greatest. Examples of this would be taking heavy lorries out of towns and villages and speeding traffic to the ports. The government would, he said, take account of difficulties facing the construction industry and aim for a stable programme of work.

Much remained to be done, he said, and the government would continue to consult with industry at the formation stages. But transport policy could not stand still. The picture was always changing. For example, patterns of land use, the effect of the need for energy conservation and the European dimension all had influenced this changing pattern.

Need to involve industrialists in education

'I should like to see more industrialists acting as school governors and advising on the planning of courses and helping in teaching at colleges and universities,' Les Huckfield, Parliamentary Under Secretary of State, Department of Industry, told the Hertfordshire County Council Industry and Education Conference on 20 September.

'Conversely,' he said, 'teachers need to go out to industry, talk with management, find out what its needs really are, discover what subjects and what treatment of them has the greatest relevance to working life. Education needs to be fitted more closely to the demands of the actual work scene. This can only be achieved through closer contact between industry and education.'

Mr Huckfield said that he would like to see more examples of students being given a chance to see for themselves what industrial management and engineering was really like, particularly before choosing A level subjects, as sixth formers had been able to do at Tynemouth. Another experiment which was was particularly valuable to youngsters before choosing a degree course was the King's College workshop at London University where 40 sixth formers spent five days of their vacation learning about life in industry and in the university engineering department.

Above all there was a need to involve young people directly and bring home to them the importance of manufacturing industry through active participation in projects and discussion. Some good schemes were already in operation and could well be adopted more widely, said Mr Huckfield. For instance Alcan Ltd had run a successful pilot project in the Oxford area last year with a competition among secondary schools for the design and building of equipment to help handicapped people. This year there was a new competition with schools setting up a simulated mini-commercial project involving design, manufacture and marketing.

In the Department of Industry, he said that much was being done to help recruit more young people of high calibre to industry through PETT: Project, Engineers and Technologists for Tomorrow. There was also valuable regional links through SATROs: Science and Technology Regional Organisation and he was personally doing all he could to boost any other new schemes which came up. The British Association for the Advancement of Science had just completed a report on the education, recruitment and development of the engineer. The government had also just set up an inquiry under Sir Monty Finniston to look into the engineering profession.

There is the need for firms to make better use of graduates in a wider range of jobs. One idea his department was pursuing was that of the 'teaching company' where graduates came into firms to do research and found solutions for specific problems.

Firms also must be encouraged, he continued, to release their managers to broaden their experience by attending special courses. Again more co-operation was essential between industry and education to ensure that Universities, Polytechnics and Business Schools could offer the right kind of courses which manufacturing industry itself had helped to set up and was prepared to support.

'This educational aspect is of course only one part of the Government's strategy to get British industry on its feet', Mr Huckfield added, 'Investment incentives, industrial democracy, taxation concessions for industry are all part of the same great effort. We are determined that British industry, British goods and British exports should be leading the world in the twenty-first century'.

Priorities for health and social services published

Priorities for spending in the health and social services over the next decade were set out by the government on 19 September. The guidelines are based on last year's consultative document [1] and the intensive discussions which followed its publication and are set out in 'Priorities in the Health and Social Services: The Way Forward'.

There are a number of modifications to the original proposals published last year. These include greater flexibility in the plans for setting up community hospitals, more help for old people living in their own homes and some modifications in the guidance for maternity and hospital geriatric services.

The document, which represents the next stage in the continuing debate on priorities, is being issued to health and social service authorities and community health councils.

[1] 'Priorities for Health and Personal Social Services in England: The Way Forward', HMSO, price £1.00.

It says that the emphasis should continue to be on adjusting the balance of care to provide greater support in the community, and on primary care, services for the elderly and disabled, the mentally ill and mentally handicapped, and on prevention. The proposals for gradual transfer of resources from the better-off NHS regions to the poorer under the principles put forward by the Resource Allocation Working Party are also to continue to be the basis under which funds are allocated to health authorities.

NEB interim statement shows profit

Profit before taxation of the National Enterprise Board and its subsidiary companies, including the share of profits of associated companies, was £13.7 million for the half-year ending 30 June. The profit for the comparable period in 1976 was 47.1 million. These figures are given in the interim statement incorporating the consolidated profit and loss account, published on 20 September by the National Enterprise Board.

The result for the half-year reflect a depressed level of profitability in British Leyland Ltd, mainly caused by industrial relations difficulties, and the continuing effects of the world aircraft industry recession on Rolls-Royce Ltd.

During the period covered by the statement, the NEB had invested £3.1 million in five more companies. This brought the total investments of the NEB to just under £500 million.

EUROPE

Frank Judd in Luxembourg

Frank Judd, Minister of State at the Foreign and Commonwealth Office visited Luxembourg on Wednesday following the meeting of EEC foreign ministers in Brussels on Monday and Tuesday.

Mr Judd made the visit at the invitation of Gaston Thorn, Luxembourg Prime Minister and Minster of Foreign Affairs. The trip was one in a series of recent visits by Mr Judd to EEC countries.

MFA to be re-negotiated

Commission plans to negotiate bilateral restraint agreements with 30 low-cost textile exporting countries by the end of November were approved by EEC foreign ministers meeting in Brussels on Tuesday. In the light of the outcome of the negotiations the EEC will decide whether or not to renew the multi-fibre arrangement (MFA) under the general agreement on tariffs and trade (GATT) in December.

The commission have also made it clear that if the negotiations are unsatisfactory they will propose unilateral community arrangements for textile imports with effect from 1 January 1978.

OVERSEAS

Healey at finance meetings

Denis Healey, Chancellor of the Exchequer, attended the annual meeting of the Commonwealth Finance Ministers in Barbados which finished yesterday (22 September). Today he flies to Washington for meetings of the International Monetary Fund and the International Bank for Reconstruction and Development that begin on 26 September.

Alan Williams visits Czechoslovakia . . .

Alan Williams, Minister of State for Industry, has been visiting Czechoslovakia this week.

During his visit he called on the Deputy Prime Minister and the Czechoslovak Federal Minister of General Engineering, Mr P. Bahyl and he also had talks with the Czechoslovak ministers concerned with trade and industry to discuss expanding opportunities for British industry in Czechoslovakia. The minister met British participants at the Brno international engineering fair.

. . . and Meacher visits California

Michael Meacher, Parliamentary Under-Secretary of State for Trade, visited San Francisco and Los Angeles this week to promote UK trade with the West Coast.

On 19 September he visited the Western Electronics Show and Convention (Wescon) in San Francisco, where 22 British firms took part with British Overseas Trade Board support. On Tuesday Mr Meacher addressed the British-American Chamber of Commerce, San Francisco, on international trade and on Wednesday he spoke on the UK economy to the British American Chamber of Commerce, Los Angeles.

Mr Meacher also met prominent Californian and UK businessmen in both cities.

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ECGD backs dollar loan to Mauritania

The Export Credits Guarantee Department has provided the guarantee of repayment and funding for a $2.2 million loan which Citicorp International Bank Ltd, acting on behalf of Citibank NA, has made available to La Societe Nationale Industrielle et Miniere (SNIM) of Mauritania.

The loan will help finance a $4.4 million contract awarded by SNIM to Hawker Siddeley Power Engineering Ltd of Loughborough for the supply, installation and commissioning of three K8 generator sets with switchgear, transformers, reactors and auxiliary equipment for the copper mining project at Akjoujt in Mauritania.

Commissioning is scheduled for mid-1979.

STATISTICS

Reduced increase in earnings

Average earnings of employees in Great Britain are estimated to have been 8.8 per cent higher in July than a year earlier. The provisional estimate of the seasonally-adjusted July index of average earnings for the industries and services covered by the Department of Employment's monthly survey, before its extension at the beginning of 1976, is 286.3 (January 1970 = 100).

Average earnings are measured by dividing the gross earnings paid by the total number of employees, without distinguishing between males and females, adults and juveniles, manual and non-manual employees, or full-time and part-time employees. Gross earnings include overtime, bonus, shift and commission payments and include, in some months, abnormal payments such as back-pay when a pay settlement is implemented retrospectively.

Home news

Consumer protection second to none

Most people never hesitate to complain about the price of a purchase but the fact that they seldom complain about the weighing and measurement equipment used suggests a high degree of public faith in weights and measures legislation and its implementation. Roy Hattersley, Secretary of State for Prices and Consumer Protection, has been to see his department's Weights and Measures Laboratory which plays a key role in the nation's weights and measures activities.

Central and local government together had proved a very successful combination for protecting the consumer.

Speaking on 14 September at the first open day of the Weights and Measures Laboratory in Chapter Street, London, Mr Hattersley said. 'I am convinced that this country's consumer protection system is second to none in the world.'

The arrangements for the control of legal metrology, Mr Hattersley said, were a prime example of the close co-operation that existed between central and local government in the consumer protection field in this country. Indeed, the Weights and Measures Act 1963 and its predecessors formed the cornerstone upon which much of the country's subsequent consumer protection legislation had been built.

Weights and measures legislation had established the weights and measures authorities. The professionalism their officers showed in carrying out their duties had made them the obvious choice of enforcement agency. This arrangement, with central government and parliament providing the legislation, and local government, with its local accountability and responsiveness to local needs, providing the enforcement, had proved a very successful combination.

The body of consumer protection law built up in this country over the years, he continued, had given the government very considerable powers to protect consumers and to promote fair trading standards. The Weights and Measures Acts controlled transactions in weight and measure; the Trade Descriptions Acts ensured correct description of goods and services; the Consumer Protection Acts controlled the safety aspects of consumer goods; the Fair Trading Act provided powers to deal with unfair trade practices; the Consumer Credit Act controlled credit trading; and the Prices Acts provided powers to control prices and require their display.

Many comparisons had been drawn between consumer protection in this country and that elsewhere, particularly in other EEC countries and the United States. These comparisons usually concerned just one particular aspect of legislation or enforcement in the countries compared. No one, to Mr Hattersley's knowledge, had tried to assess quantitatively the total effect of the United Kingdom's system. But the network of consumer advice centres and citizens' advice bureaux, the comprehensive local authority trading standards service and the role of his department, backed by agencies such as the Office of Fair Trading, the Monopolies Commission, the Price Commission, the National Consumer Council, and the nationalised industries consumer councils, made, he was convinced, this country's consumer protection system second to none in the world.

Accurate measurement

The basis of fair trade is uniform weights and measures. In everyday transactions, the accurate measurement of our pint of beer, gallon of petrol and metre of fabric is taken for granted. The possibility that the measuring instrument, whether by accident or design, might not measure correctly is never considered. Yet the cost of using an instrument which gives say 5 per cent under measure is tantamount to a 5 per cent price rise to the consumer, while an instrument which gives over measure eats into a trader's profit margin which then requires a price rise to compensate for the 'loss'. The annual value of material and goods determined by measurements made in the market place runs into many thousands of millions of pounds. The cost of being casual or just plain wrong in these trade measurements is considerable.

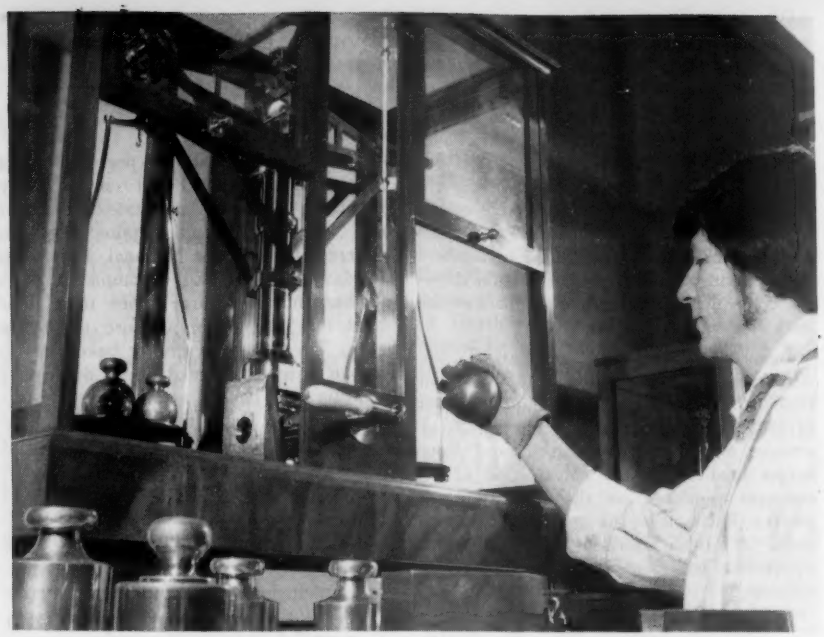
Unique in the UK, this gravimetric balance checks the volume of an oil company's reference standard by measuring the weight of water contained in it to an accuracy of one part in 25 000.

Roy Hattersley (right) being presented with a standard pound weight by Geoffrey Souch, head of legal metrology branch.

Current legislation has three main purposes: to establish a uniform system of units of weight and measure for use throughout the country, and above all for use in trade; to control weighing and measuring equipment which is in use for trade, so as to ensure that it measures in legal units, that it is kept in an accurate condition and that it will not facilitate fraud by the user; and to protect the public against short weight or measure.

Confidence in the system has been established and maintained only by means of the control of weights and measures equipment. The central authority for this activity is the legal metrology branch of the metrology, quality assurance and standards division of the Department of Prices and Consumer Protection. Enforcement throughout the country is in the hands of the local authority trading standards officers, formerly known as weights and measures inspectors.

The department's Weights and Measures Laboratory has recently been refurbished to meet the demands of modern technology and the department's increasing obligations and commitments. It provides the testing facilities necessary for the examination as to suitability for trade use of the many and varied patterns (designs) of weighing and measuring equipment submitted for national and EEC approval, and the nationwide calibration service for determining the values of the



Differences in weight of one part in two million can be measured with this mechanical balance, still one of the most accurate methods of checking weights.

reference standards used by industry and local authority weights and measures inspectors.

Pattern examination has a profound, if not obvious, importance to the consumer. To the weighing or measuring instrument manufacturer it is vital. To ensure fair trading, pattern examination and approval of measuring equipment must reasonably establish the metrological reliability and security of the design, the absence of features that could lead to confusion in operation or fraudulent use and the compliance with legal requirements of output data, such as the indication of the measured quantity, functions of the quantity (eg price to pay) and any record of the measurement.

Measurement standards for use in trade rely for their authority on the work carried out in maintaining the accuracy of local

Testing the accuracy of a flow meter of the sort used by local authorities to check fuel oil deliveries.

Comparator for linear measures, until the advent of laser measuring techniques, the most accurate method of checking line standards.

authority reference standards of length, mass and capacity which are used to validate the working standards used by trading standards officers in their periodic checks of traders' measuring equipment. These reference standards are checked at regular intervals by assizers from the legal metrology branch. Thus trade measurements have an assured consistency which is comforting to the consumer and essential for law enforcement.

The legal metrology branch also has responsibility for ensuring the compatibility of UK requirements and regulations with EEC, and other international requirements, for undertaking negotiations in those bodies and for consulting other interested government departments, local authorities, industry and national bodies.

Inquiries to Head of Laboratory, Weights and Measures Laboratory, 26 Chapter Street, London SW1P 4NS, tel. 01-834 7032.

Wider field of selection sought for PO board

People of wide experience able to play a full and constructive part in the whole range of Post Office board discussions are being sought by the Department of Industry. Gerald Kaufman, Minister of State for Industry, speaking to the Post Office Unions School at Rugby on 17 September, was discussing the Post Office's experiment in industrial democracy.

The department, Mr Kaufman said, had to consider the appointment of two part-time board members, who could speak from a consumer point of view. It was of course already considering these appointments but did not want to confine the field of selection to the well-known names in that small body of able and public spirited men and women, who tended to be those who spoke for consumers on so many public boards. That is why he would like to hear from anyone with the requisite qualifications for these seats on the Post Office board.

The experience and qualifications which would be needed were pretty formidable. People with a wide experience were needed so that they could speak from the breadth of it and who were able to play a full and constructive part in the whole range of Post Office board discussions. They would need to be able to look at Post Office problems in a really wide context, and to be ready to devote a fair amount of their time to them. Mr Kaufman was sure that there were men and women of this calibre in many walks of life whose experience was available to be tapped, whether for the Post Office or any public appointment.

Britain's advanced and proven technologies shown at 'Offshore Europe'

Exploration and appraisal activity has been at levels which look like making 1977 the second busiest year on the United Kingdom's continental shelf since the oil companies moved into the North Sea. Taking development work into account it has been the busiest year.

Minister of State for Energy, Dr Dickson Mabon made this point in an opening address when he visited the 'Offshore Europe 1977' exhibition and conference in Aberdeen on 14 September. He emphasised that companies seemed finally to be making the leap into the second phase of new oilfield development that had been awaited so long.

From virtually nil the United Kingdom's share of the North Sea market had been built up to 57 per cent last year, Dr Mabon said. He added that he was happy to announce that in the first quarter of 1977 the proportion was almost two-thirds. He recommended foreign guests when looking round

the exhibition to look very closely at the British stands. These represented the most advanced technologies available for offshore development and also some of the most proven.

By 1980, Britain would be in the top 10 of the world's oil producers. Was it unreasonable, Dr Mabon asked, for the United Kingdom, therefore, to aim to be one of the worlds principal suppliers of offshore goods and services?

The Offshore Supplies Office of the Department of Energy working in conjunction with the Foreign and Commonwealth Office and the British Overseas Trade Board had identified many areas of offshore development throughout the world where opportunities for British industry existed. The valuable expertise and experience gained by British industry in the North Sea had placed it in a strong position to secure export orders.

The world offshore market would be worth as much as £6,000 million a year. Dr Mabon said that he was confident that British industry could win a substantial share of it.

Orders secured

Apart from the purely commercial aspect of participation, such an exhibition affords a unique opportunity for meetings between exhibitors and the forming of alliances and associations leading to their mutual co-operation and the ultimate benefit of the industry.

From Farquhar of Huntly, Aberdeenshire, manufacturers of accommodation units and modules, came the news of an order, not yet finally confirmed but which they are confident of receiving, valued at £7½ million. This, the largest single order taken at Offshore Europe 77, concerns the supply of 2500 town housing units to a North African government over the next 2½ years. This order comes on top of more than £10,000 worth of other business done during the exhibition, including a transportable operations control module to house the Oceaneering RCV-225 remote controlled underwater vehicle, the preliminary 'specification drawing' for which was given to Farquhars on the back of a cigarette packet.

Incon (Offshore) Ltd, of East Tullos, Aberdeen, have received a letter of intent from Brown and Root for a major contract in India. Incon will provide internal X-ray services on board three Brown and Root barges involved in the construction of oil and gas pipelines on the Bombay High project. This will be the first employment in India of Incon services and inspection equipment including their pipeline X-ray crawlers.

Draeger Offshore of Gateshead have sold in excess of £50,000 worth of their breathing apparatus, gas detection equipment, underwater breathing equipment, and their SR60 self-rescuer escape apparatus to various buyers. This includes a single £5,000 order booked in the first hour of the first day of Offshore Europe 77 for equipment urgently required by a local buyer. The equipment was delivered to Aberdeen from Draeger's Gateshead works by the following morning.

Cryer cuts first sod

Bob Cryer, Parliamentary Under-Secretary of State, Department of Industry, on 16 September, inaugurated development work on an inner area site at Brook Road, Bootle. The department is constructing two terraces of advance factory units, each one of 1160 m² (12 500 sq ft) and capable of division into four units. The scheme was prompted by the success of similar terrace units recently provided by the department in inner areas of Birkenhead and Liverpool.

Bread prices

Master bakers were asked to peg their prices during the recent bread strike. Roy Hattersley, Secretary of State for Prices and Consumer Protection, announced on 15 September that the National Association of Master Bakers was recommending its members not to charge more than their prices on 5 September, before the strike began. To enable the master bakers to do this, an order was signed on 16 September exempting the bakers' action from registration under the Restrictive Practices Act.

Complaints about overcharging by master bakers were to be investigated by the national association. Almost all the bread available was baked by the master bakers. It was a premium product and generally cost more to produce.

Whitby, Gateshead, Truro and Birkenhead advance factories occupied

Kullman Glass Ltd have taken occupation of a 900 m² (10 000 sq ft) advance factory built by the English Industrial Estates Corporation on the Stainsacre Industrial Estate, Whitby, North Yorks. The company will use the premises for the manufacture of disposable glass products for medical and veterinary use and expects to employ about 40 people as production is built up over the next year or two.

Integrated Packaging Ltd, is to occupy new terrace unit premises of about 325 m² (3500 sq ft) built by the English Industrial Estates Corporation on the Team Valley Industrial Estate, Gateshead. A newly formed company which will use the premises for short run packaging requirements, specialising in plain and printed folding cartons, Integrated Packaging expects to employ a total of 20 people as production is built up over the next few years.

F. C. Gardner Ltd has taken occupation of a 900 m² (10 000 sq ft) advance factory built by the English Industrial Estates Corporation on the Threemilestone Industrial Estate, Truro, Cornwall. The company, which specialises in the design and manufacture of vibratory bowl feeding systems, custom built machinery, press tools, jigs and fixtures, claims the move has been brought about by an increasing demand for their automation machinery and tooling services, which has resulted in the company trebling its sales turnover within the last nine months. Early in October the company will be moving its entire manufacturing operations from Chasetown in Staffordshire to Truro and it is anticipated that they would create job opportunities for a further 35 people over the next 12 months.

The first company, Polyset Products Ltd, has taken occupation of premises built by the English Industrial Estates Corporation on

the Department of Industry's new Rock Ferry Estate, Birkenhead. The company has taken premises of about 530 m² (5700 sq ft) for the reaction injection moulding of plastics for use in the engineering industries. It expects to employ about 25 people as production is built up over the next year or two.

. . . and one in Wales allocated

The Welsh Development Agency's 25 000 sq ft no. 1 advance factory at Rogerstone, Gwent, has been allocated to DGI Aluminium Products of Salford, Manchester. The company expects to provide 64 jobs after its first year of operation, increasing to 86 after the third year. The Rogerstone project will produce aluminium doors, windows and ancillary spare parts for other manufacturers. One of the main considerations in the choice of Rogerstone as the new location for this development was its close proximity to the M4.

Heathrow congestion to be relieved

All overseas airlines have been reminded by the Department of Trade that permits for whole-plane passenger charters to or from London from 1 April 1978 will be valid only for airports other than Heathrow. The Civil Aviation Authority is amending the licences of British airlines so that the same condition will apply to them. None of these arrangements will apply to 'part-charters' on scheduled services or to whole-plane cargo charters which may continue to be operated at Heathrow.

In his announcement in the House of Commons earlier this year, Edmund Dell, Secretary of State for Trade, emphasised that these measures were being taken because of the need to reduce the congestion at Heathrow. He also stressed that they would be applied equally to British and overseas airlines.

CAA go-ahead for Skytrain at Gatwick

Laker Airways' Skytrain is to be allowed to operate from Gatwick Airport, London; without restriction on the number of seats on any one flight; and on the 'piece' baggage system, the Civil Aviation Authority has decided.

The authority is concerned that Laker Airways as well as established scheduled operators should be given a fair and equal opportunity to compete.

The CAA's original decision, taken in 1972, was to require Skytrain to operate from Stansted Airport, London, and to be subject in winter to a limit of 189 passengers on each flight. This was to provide a measure of protection to British Caledonian's services on the North Atlantic. BCAL suspended its Gatwick-New York service in 1974 and the new Bermuda Air Services Agreement provides for only two British airlines to be designated between London and New York. British Airways and Laker Airways have been duly designated and there is no provision for operations by a third carrier after 31 October 1977. The authority last week approved competing fares between London-New York and feels that any residual case there might be for protecting British Airways' services against diversion of traffic is greatly diminished.

The authority has attached a new condition to the Skytrain air transport licence requiring that tickets shall be sold and that passengers and their baggage shall be checked in only at a place outside the boundaries of Gatwick Airport.

Containing the product liability explosion

Europe is moving towards greater consumer protection by imposing the doctrine of 'strict liability' without reference to negligence. The London Chamber of Commerce and Industry will hold a one-day seminar, 'The anatomy of product liability insurance', in London on 26 October, presenting up-to-date analyses and assessments by specialist speakers of the cause-and-effect aspects of the wide-ranging product liability explosion.

Government sales

11 October 1977—Miscellaneous Stores

Location
Central Ordnance Depot, Bicester, Oxon.

Auctioneers
Midland Marts Ltd (Dept L), 4 Market Square, Bicester, Oxon (08692 2073).

Stores lying at COD Bicester and other depots comprising clothing and textiles, vehicles, machine tools, tentage, tyres and MT spare, engineers and electronic equipment, furniture and other miscellaneous items.

Catalogues which give details of the lots, conditions of sale, viewing times, etc, are available from the auctioneers from two weeks before and up to the day of the sale, price 40p, postage and packing 15p (postal orders only).

'T & I' subscriptions and sales

Subscriptions and sales inquiries about *Trade and Industry* should be directed to HMSO at any of the following addresses: 49 High Holborn, London WC1V 6HB; 13a Castle Street, Edinburgh EH2 3AR; Brazennose Street, Manchester M60 8AS; 258 Broad Street, Birmingham B1 2HE; 41 The Hayes, Cardiff CF1 1JW; Wine Street, Bristol BS1 2BQ; 80 Chichester Street, Belfast BT1 4JY, or through any bookseller.

Wembley Auction Sales 1977

4 October 1977

View Days:	Day preceding and morning of sale
Location:	Department of the Environment Property Service Agency Supplies Stores India Pavilion Exhibition Grounds Wembley, Middx. Tel. 01-903 2508
Description of Goods:	Office and Miscellaneous Furniture etc.
Auctioneers:	Messrs. Hollingsworths Westcombe House 56/58 Whitcomb Street Leicester Square London WC2H 7DR Tel. 01-893 1875

Potential buyers are advised to refer to the official catalogue available direct from the auctioneers price 10p

ENCIRCLE TI 599 ON PAGE 592 FOR FURTHER INFORMATION

It is designed to be of particular interest to the British manufacturers, the British firm, or person, who sells the product and the British insurance industry.

In America strict liability has been virtually endemic since the ruling in California in 1963. Dramatic rises in the volume of claims (from 50 000 in the 1960s to one million in 1975), spiralling awards in United States court cases (an individual award of $1,000,000 is relatively common) and the costs of providing insurance protection exploded on to the American scene with an incredible impact.

With the adoption of either the draft convention proposed by the 17-nation Council of Europe or the draft directive as advocated by the EEC, the product liability picture could soon change drastically. The consequences of such a continuing trend could include unbearable increases in the costs of products, business closures and unemployment. In the United Kingdom, the Lord Chancellor's department is considering a convention with the United States for the reciprocal enforcement of judgments in civil matters.

John Fraser, Minister of State, Depart- of Prices and Consumer Protection, will make the opening address and the chairman of the seminar is Sidney Golt, chairman of the chamber's company law committee.

Further information from the London Chamber of Commerce and Industry, 69 Cannon Street, London EC4N 5AB, tel. 01-248 4444, ext. 39.

UKAEA annual report published

The United Kingdom Atomic Energy Authority has published its twenty-third annual report and accounts, which covers the period 1 April 1976 to 31 March 1977. Copies may be obtained from the authority's London office, 11 Charles II Street, London SW1 4QP or from HMSO, price £2.00.

Films to save lives

Last year there were 48 fatalities and more than 30 000 serious injuries in factory processes involving machinery.

Four new short films on the safe use and guarding of a wide range of industrial machinery were launched by the Health and Safety Executive in London on 13 September.

Intended as important additions to relevant safety training programmes, they are aimed at all levels from shop floor to middle management, including safety representatives. They will also be used by the executive's health and safety inspectors.

The 16 mm colour films, the longest is 12 minutes, are entitled 'Abrasive Wheels', 'Principles of Guarding Machinery', 'Power Presses', and 'Woodworking Machinery'. Available for hire or sale, these films explore aspects of the appropriate regulations including the use of eye protection, operator instruction and training, machinery inspections and good housekeeping.

They are available from the Central Film Library, London, Scottish Central Film Library, Glasgow and Welsh Office Film Library, Cardiff.

Energy audits offer vast savings

£1 million or more on many large companies' annual overall costs could be saved by tight control of energy use, through an energy audit. Dr John Cunningham, Parliamentary under Secretary of State for Energy, told an audience of senior people from industry and commerce, training establishments and government departments on 13 September. He added that if fuel costs rose more rapidly than other costs, perhaps doubling by the end of the century, the case for low-risk investment in energy-saving would be even stronger than it was today.

Launching a series of two-day training courses in energy management and auditing organised by Johnson Controls in London, Dr Cunningham pointed out that at a time when competitors abroad without the United Kingdom's indigenous energy strength would be paring their energy use and energy costs to a minimum, Britain could not afford to be left behind in the international pursuit of better energy management, with its industry burdened with unnecessary excess costs.

Britain's competitors abroad did not have our indigenous energy strength. As such the industrialised nations of the world would be making ever more strenuous efforts to streamline their energy consumption, to increase energy productivity and to reduce energy demand.

In organisations where tight control of energy usage had been lacking, and that means most, he said, an energy audit should lead to a 10 per cent reduction in consumption in the short term, with minimal capital expenditure or payroll costs. The audit would indicate areas of excessive use or anomalies in patterns of use, and corrective action could be taken. Many organisations regarded energy costs of around five per cent of total expenditure as insignificant. But a 10 per cent savings on that gave half a per cent reduction in overall costs.

This must have a substantial effect on the operating surplus or deficit and was well worthwhile, whatever the size or economic circumstances of the company. For a company with a bill for overall costs of, say, £200 million for materials and services, labour and capital, that would mean a saving of £1 million a year.

Dr Cunningham added that capital expenditure on energy-saving could and should go hand-in-hand with investments in new plant and equipment. The two were not really in competition for funds. The pay-back period with energy conservation measures could often be much shorter than for other types of investment. It was a low-risk investment in cost-reduction. And once the initial outlay was recovered, savings went on and on.

Patents endorsed 'licences of right'

Under section 35 of the Patents Act 1949 the following patents were endorsed 'licences of right' on the dates specified.

8 September 1977

1242708 Agfa-Gevaert Aktiengesellschaft
Production of reversal colour photographic images
1299233 Agfa-Gevaert Aktiengesellschaft
Method of measuring web tension
1402047 Agfa-Gevaert Aktiengesellschaft
Aqueous ink for use in the ink jet process
1464544 Agfa-Gevaert
Improvements relating to electrostatic image formation
1464863 Agfa-Gevaert
Improvements relating to the production of electrostatic images
1262205 Wilson and Longbottom Ltd
Improvements in looms for weaving carpets and other pile fabrics
1361404 A. V. Lancashire Ltd
Improvements in or relating to fastening devices
1370779 Howard Bernard Forster
Pessary
1433329 Industrial Furniture Accessories (Rossendale) Ltd
Improvements relating to buttons
1471660 Glaverbel-Mecaniver
Hollow panel units

Any person who claims that the patentee at the time of endorsement of any of the above patents was precluded by a contract in which claimant is interested from granting licences under the patents may apply for cancellation of the endorsement on patents form no. 45 within two months after the date of endorsement.

E. Armitage, Comptroller

Cancelled 'licences of right'

Under section 36 of the Patents Act, 1949, notice is hereby given that the endorsement 'licences of right' upon the undermentioned patents was cancelled on 24 August 1977.

1382689 N. C. Ashton Ltd
An improved aluminium bronze
1383613 N. C. Ashton Ltd
Improvements in or relating to securing members

E. Armitage, Comptroller

'T & I' index inquiries

Readers wanting to know when articles and items of information were published in *Trade and Industry* should consult the published indexes which are issued free to subscribers. For material published in recent months, inquiries of this kind can be made to the Department of Industry Library's indexing section, tel. 01-215 5842. (Alternative no 01-215 5051.)

Official Receivers' offices

Official Receivers are responsible for the administration of cases in bankruptcy and compulsory liquidation. Inquiries should be addressed to the nearest Official Receiver.

High Court of Justice
Senior Official Receiver: J. B. Clemetson

Bankruptcy
Thomas More Building, Royal Courts of Justice, Strand, London WC2A 2JY (Tel: 01-405 7641)
Official Receivers: D. A. Thorne; J. Tye

Companies Winding-up
Atlantic House, Holborn Viaduct, London EC1N 2HD
(Tel: 01-583 8931)
Official Receivers: L. R. Bates; N. Saddler; H. W. J. Christmas

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F. L. Sage

Government support for industry

Harold Wilson's committee to review the functioning of financial institutions has received a number of submissions produced by government departments and others. Evidence submitted by the Department of Industry and the Treasury was published this week. The text of the DoI paper, 'Government Support for Industry', which examines the main schemes of government assistance for industry, is published below.

The government is committed to encourage industrial expansion and development by creating an economic climate favourable to industry, and to reverse the relative decline of British industry by improving industrial performance and raising the growth of capacity. To support macro-economic measures, the government has a range of micro-economic measures which are operated within the overall policy of its industrial strategy.

Among these, incentives to invest are the most important. There are national incentives available throughout the country; these are described in part 1 of this paper. In addition, the strengthening of the industrial base in the assisted areas has been – and remains – an important part of the government policy; the main measures to support industry here are set out in part 2. Special arrangements applicable in Northern Ireland are described in part 3. As well as support for investment, the government also assists industry through a wide variety of other schemes, which are set out in part 4. (It is to be noted that, where appropriate, measures of assistance are cleared with the EEC commission in accordance with the provisions of the treaty of Rome.)

This paper does not cover assistance for exports, which is the subject of another paper; nor the wide range of employment and training measures which fall outside the scope of this paper.

Change of figures

'Government support for Industry' was submitted to the Wilson committee early in April 1977; since then some of the figures quoted will have changed, and new industry schemes have been introduced. The more important changes are identified in footnotes to the text. Statistics for selective financial assistance for the full financial year to 31 March 1977 appear in the Industry Act annual report for 1976-77 to be published next week.

1 National schemes

Tax allowance for investment

Since October 1970, when the investment grant scheme was ended, the basic national incentive offered by the government to encourage investment has taken the form of accelerated depreciation allowances against taxation. Under the current system, tax allowances are given on a national basis without any regional differential.

Plant and machinery

The most important single incentive is the first year allowance for expenditure on plant and machinery. Since March 1972, up to 100 per cent of such expenditure can be set against profits for the year in which the expenditure is incurred.

Where a company does not have sufficient taxable capacity in an accounting period to absorb the whole of its first-year allowances, the excess may be carried forward indefinitely as a loss to set off against future profits arising from the trade, or carried back to set off against profits arising in the three previous years, or surrendered to other companies within the same group. Alternatively, the company may claim only part of the allowances in the first year, and carry forward the rest against future profits to be allowed at the rate of 25 per cent per annum on the reducing balance basis.

It is estimated that for accounting periods ending in 1975-76 (for which mainstream tax is payable mostly in 1976-77), first-year allowances will be due on capital expenditure of nearly £5,700 million. In practice, at least over the last two or three years, a number of companies (and groups) have not had sufficient taxable profits to enable them to utilise immediately all of the allowances due to them. This phenomenon, known as 'tax exhaustion', reduces the effectiveness of tax incentives for investment.

Industrial buildings

Complementary to the allowances for plant and machinery expenditure are the allowances given for expenditure on the construction of industrial buildings (including additions to existing industrial buildings).

The allowances consist of an initial allowance at the rate of 50 per cent (from November 1974), which can be claimed when the expenditure is incurred, and an annual writing-down allowance of 4 per cent of cost, which commences when the building is brought into use. The full expenditure will therefore generally be written off for tax purposes within 13 years.

It is estimated that for accounting periods ending 1975-76 initial allowances will be due on expenditure on the construction of buildings amounting to some £600 million. Again some companies will have insufficient profits to take immediate advantage of all the allowances due to them.

Stock relief

Although not designed as an investment incentive, the stock relief, introduced by the Chancellor in 1974, is relevant here since, by reducing the cost to a company of holding stock, it can act as an incentive to higher stock levels or alternatively make more funds available for the company for other purposes.

It is estimated that in the three years to 31 March 1977 companies' corporation tax payments have been reduced as a result of stock relief by approximately £3,000 million.

Government's commitment to the present reliefs

In the course of his budget statement in April 1976, the Chancellor of the Exchequer promised that stock relief in some form would remain as a permanent feature of our tax system (confirmed in his budget statement in March 1977), and gave an assurance that the system of tax allowances for fixed investment would continue in its present form. The effect of these reliefs is that, at present, substantially the whole of the profits which a manufacturing company continues to re-invest in its business, whether by way of stock or plant, are effectively relieved from corporation tax.

Deferred taxation

Although the effect of all these allowances is to produce a cash flow benefit for the company by way of reduction in tax payable, the allowances are in principle a deferment of tax liability. In the case of stock relief the tax becomes payable if the stock value subsequently falls. In the case of allowances for fixed investment, because the tax depreciation has been effectively accelerated into the first year, the allowances in later years are correspondingly reduced: and when an asset is sold at a price exceeding its written-down value for tax purposes, a balancing charge will be made to recover excess allowances.

As the allowances are a deferment of tax liability rather than outright exemption, the provision for deferred tax liability in companies' accounts has caused some difficulty, and its treatment is currently under review[1].

[1] See exposure draft 19, 'Accounting for Deferred Taxation', published by the Accounting Standards Committee, 25 May 1977.

Selective financial assistance under the Industry Act 1972

Selective financial assistance may be provided under section 7 and section 8 of the Industry Act 1972. Assistance under section 7 is provided for projects that create or safeguard employment in the assisted areas and is described in part 2 below. The criteria for assistance under section 8 are that the investment must be in the national interest and benefit the economy of the United Kingdom or a part of it; it is not limited to the assisted areas.

Assistance under section 8

Payments of assistance under section 8 now total about £160 million, and there are commitments to provide a further £325 million assistance[2]. About half of the payments and commitments have been made under the special schemes such as the accelerated projects scheme and schemes for particular industrial sectors described below, and the offshore supplies scheme; rescue cases such as Chrysler, British Leyland and Alfred Herbert have accounted for the balance, but are now a decreasing proportion.

Accelerated projects scheme

The accelerated projects scheme was introduced to encourage companies to bring forward projects in the recession which would otherwise have been deferred. Some 119 projects, with costs totalling about £640 million, were brought forward with assistance of £84 million to be paid as expenditure on the projects is carried out. This scheme has now been closed for applications and has been succeeded by the selective investment scheme.

Selective investment scheme

An initial allocation of £100 million to the new selective investment scheme was announced in December 1976, designed to promote investment projects which will, through improved performance, yield significant benefits to the economy. The scheme operates on a selective basis: applications are examined individually in their industrial context and against the aims of the government's industrial strategy. The scheme is directed towards manufacturing industry with particular attention to the engineering sector, but desirable projects from other sectors are eligible for consideration.

The principal criteria for assistance are that:

1 the company would not have undertaken the project on the basis proposed (in relation to its nature, scale or timing) in the absence of government assistance. Evidence justifying consideration may include a genuine and significant advancement in timing, a substantial increase in scale or efficiency, or a desirable extension of product range or marketing;
2 projects must be commercially viable and must result in a significant improvement in performance;
3 projects should normally involve new investment of at least £0.5 million including working capital and ancillary costs directly associated with the project.

[2] A special guide covering the section 8 schemes will be published in the 7 October issue of *Trade and Industry*.

The amount and terms of assistance are negotiated individually as the minimum necessary to bring about the additional benefits associated with the project. Account is also taken of the nature and scale of the investment, and the degree of risk, projected return and industrial policy advantages. The scheme thus enables the government to assist major projects particularly desirable from the national point of view, but which would not have proceeded on the basis proposed without the assistance.

Assistance under these schemes is normally in the form of a grant, usually an interest relief grant, and it is evident from the figures quoted above for the accelerated projects scheme that the amount of investment brought forward is many times greater than the amount of government assistance provided.

Industry schemes

Over £240 million has been allocated under section 8 of the Industry Act 1972 to be spent on schemes to assist individual industries. These schemes have been drawn up to meet the needs of particular industrial sectors. The purposes and conditions vary, but the common theme is to encourage modernisation and rationalisation. The schemes now in operation are listed in the table (above).

A further scheme for the instrumentation and automation industry is at present under discussion with the EEC[3].

These schemes were drawn up in discussion with both sides of industry, and, where practicable, through the industrial sector working parties.

National Enterprise Board

The National Enterprise Board was established under the Industry Act 1975 with the principal objective of promoting efficiency and international competitiveness in British industry. The NEB provides equity capital and loan finance for industrial investment; acts as a holding company for government shareholdings transferred to it and for new shareholdings it acquires; can help to restructure sectors of industry; and provides selective financial assistance to industry under the Industry Act 1972 when directed to do so by the secretary of state. The NEB is required to look for an adequate rate of return on all investments it makes on its own initiative. The NEB will have spent about £150 million up to the end of the financial year 1976/77 and will have an allocation of £275 million in 1977/78.

The NEB is required to give special consideration to areas of high unemployment when deciding where to expand an existing operation or locate a new undertaking. Directors have been appointed for the north and north-west, based in Newcastle and Liverpool, with the principal task of seeking out opportunities for NEB investment. So far only a small number have been identified, but steady progress is being made. The NEB is fully aware of the importance which the government attaches to its regional role; it seems likely, however, that, for some time at least, the principal impact of NEB investment in the areas of high unemployment will come from the activities of the NEB's major subsidiaries.

[3] The instrumentation and automation scheme was announced on 9 August 1977, with an allocation of £10 million.

Industry schemes

	Prospective commitments (£ million)
Offshore supplies	95
	Allocated (£ million)
Clothing industry	15
Ferrous foundries (now closed)	40*
Machine tools	20*
Paper and board	23
Textile machinery	20
Printing machinery	15
Poultry meat processing	5
Red meat slaughter house	20
Wool textiles (phase 1) (now closed)	(18)
Wool textiles (phase 2)	5
Non-ferrous foundries	20
Electronic components	20

* These allocations were increased to £80 million and £30 million respectively following the Chancellor of the Exchequer's statement on 15 July.

Administration of selective assistance

Within the Department of Industry there are a number of sponsoring divisions for the main sectors of industry; and close contacts are maintained by these divisions with their respective industries.

The divisions operate the industry schemes (though some are operated by regional offices – see 'Administrative arrangements for selective assistance' on page 540 – and the poultry and red meat schemes in conjunction with the Ministry of Agriculture, Fisheries and Food). The Industrial Development Unit examines individual projects of over £0.5 million, and it runs the accelerated projects scheme and the selective investment scheme. Advice of the Industrial Development Advisory Board composed of senior businessmen and union representatives is sought on all important cases.

2 Preferential regional assistance

Britain's industrial prosperity and growth in the nineteenth century was based predominantly on the coal, steel, heavy engineering and shipbuilding industries. These were largely concentrated in traditional industrial areas, and the decline in these industries has led to employment problems in particular parts of the country. The government has for many years pursued an active policy in favour of these regions, combining incentives to firms to expand in or move to areas experiencing serious structural unemployment or other economic problems with restraints on expansion in other areas[4].

The assisted areas

Assistance is given to encourage develop-

[4] A booklet, 'Incentive for Industry in the Areas for Expansion', is available free from the Industrial Expansion Team, Department of Industry, Millbank Tower, Millbank, London SW1P 4QU, tel. 01-211 6486.

ment in three categories of area within Great Britain: special development areas, development areas, and intermediate areas, and the level of assistance reflects the priorities of each of them. They cover the whole of Scotland and Wales, northern and north-west England, Yorkshire and Humberside, some small fringes of the Midlands, and Cornwall and part of Devon. (For assistance available in Northern Ireland, see part 3 below.)

Financial assistance to industry to invest in the assisted areas is essentially a package of incentives backed by the sanction of the industrial development certificate control. Within the package, the main forms of assistance to industry in the assisted areas are regional development grants, regional selective financial assistance under section 7 of the Industry Act 1972, and the provision of government factories. Negotiations with firms tend to cover the whole range of industrial incentives, and the specific schemes described below are additional to those described in part 1 above.

Provisional estimates indicate that in 1976/77 over £700 million will be spent on assistance to industry in assisted areas as regional preferential expenditure. (This includes £217 million on regional employment premium (see below) which has now ended; the remainder was largely but not exclusively in the form of grants to private industry). In addition over half the prospective expenditure on industry schemes and the accelerated projects scheme and selective investment scheme will be in respect of projects within the assisted areas.

Regional development grants

Regional development grants, introduced in 1972, make up the largest single item of expenditure on encouraging industrial investment in the assisted areas. Grants of 20 per cent and 22 per cent are available in the development and special development areas respectively towards the cost of buildings, works (excluding mining works), plant and machinery; and of 20 per cent on buildings and works only in the intermediate areas. These grants are restricted to expenditure incurred on new assets (except for certain adaptations of buildings) used on premises wholly or mainly engaged in qualifying activities, principally manufacturing. These grants, unlike selective grants under section 7 and section 8 of the Industry Act 1972, are not deducted from the company's expenditure when its tax allowances are calculated.

The estimated total expenditure in 1976/77 is £408 million. This includes some £25 million for mining and quarrying and some £30 million for construction (which cease to be eligible for grant on assets provided after 31 March 1977); around £90 million will be paid to the nationalised industries and a small proportion of the remaining sum to companies owned or partly owned by the government. Regional development grants are administered from RDG offices in Glasgow, Cardiff, Billingham and Bootle.

Regional selective financial assistance

Under section 7 of the Industry Act 1972 selective financial assistance is available in all the assisted areas. Interest relief grants (or in a minority of cases loans on favourable terms) are available for investment projects which create employment. Selective assistance is also available in certain circumstances for projects which will maintain employment that would otherwise be at risk. There are limits on the amount of assistance which can be given per job created or safeguarded as well as on the proportion of the cost of any project which can be met from public funds. Payments of assistance under section 7 to 31 January 1977 total £163.5 million, and there are commitments to provide a further £131.2 million of assistance. These payments and commitments are in respect of projects costing some £2,600 million which will create or maintain some 330 000 jobs in the assisted areas.

Selective financial assistance is not paid to nationalised industries in respect of their main line activities, though it may be available for ancillary projects. Assistance is also available for the cost of moving administrative activities into the assisted areas. The amount so far paid under section 7 to companies wholly or partly owned by the government (other than in respect of rescue cases) is fairly small.

Administrative arrangements for selective assistance

Responsibility for section 7 of the Industry Act is split between the Secretaries of State for Industry, Scotland and Wales, the Secretaries of State for Scotland and Wales being responsible for the administration of section 7 in their areas. In England the regional offices responsible for assisted areas handle most of the cases that arise under section 7 of the Industry Act. The formation of policy and those cases which are outside the delegated powers of the regional offices (which vary with the size and the experience of those offices) are handled at headquarters by regional industrial finance division. Regional offices, and in Scotland and Wales the Scottish and Welsh Offices, also carry out a good deal of processing and appraisal work on smaller cases that are assisted under the section 8 schemes. The Scottish and Welsh Offices and the regional offices of the Department of Industry both inside and outside the assisted areas also act as agents for other aspects of the department's work and for other departments, for instance on export promotion for the Department of Trade and on energy conservation for the Department of Energy.

Industrial development certificates

The industrial development certificate system backs up the incentives package by helping to steer developments to the special development and development areas. Outside these areas, new industrial building above a certain size requires a certificate from the department stating that the proposed development 'can be carried out consistently with the proper distribution of industry'. Legislation further requires due 'regard to the need for providing appropriate employment in the development areas'. The terms of the legislation provide wide discretion in the operation of the control. It confers a power to prevent development in certain places, not a power to direct to other places. The control does not apply to changes in the occupation of existing industrial building. However, the system provides the department with the opportunity of identifying projects which might reasonably be expected to locate in the special development and development areas and may also influence firms' location decisions for new projects.

Regional employment premium

The regional employment premium introduced in 1967 has now ended. It was paid automatically, irrespective of need, and had not proved as effective as originally hoped in generating and maintaining employment in the development and special development areas in Great Britain. Also its value had been severely eroded by inflation. Expenditure on REP in Great Britain in 1976/77 is estimated to be £217 million. The government considers that selective measures are a more effective use of resources and have announced more selective measures including the selective investment scheme and allocation of more funds to the NEB and the various schemes for assistance to particular industries.

Scottish and Welsh Development Agencies

The Scottish and Welsh Development Agencies, established by acts of parliament in 1975, have wide powers in the industrial and environmental fields. In addition to developing factories and industrial estates, reclaiming derelict land and improving environmental amenity, the agencies have powers to provide finance to industry and to provide advisory services.

The agencies have powers (parallel to those of the NEB) to provide finance for industrial undertakings either by taking holdings in companies or by making loans on commercial terms. Like the NEB, they are required to look for adequate rates of return on their industrial investments. In providing equity the agencies may provide any kind of risk bearing capital; and such investments can as appropriate have special voting status, or deferred or preferred ranking, or could be in the form of loan stock with convertible rights as best suits the particular needs of the company in which they are investing. (Such arrangements may, in particular, meet the needs of small private companies which are undercapitalised.)

They may also, through subsidiary companies, carry on industrial undertakings whether alone or jointly. In all cases they must always have regard to the profitability of the enterprises concerned. Managerial and advisory services are available, particularly to small firms. At the outset, SDA took over from the Small Industries Council for Rural Areas in Scotland (Sicras) its role of assisting small businesses in rural Scotland. On 1 April 1977, the WDA assumed the parallel function in Wales from the Council for Small Industries in Rural Areas (Cosira).

The Highlands and Islands Development Board

The Highlands and Islands Development Board has extensive powers under the High-

lands and Islands Development (Scotland) Act 1965, to assist economic development within its prescribed area (the Highland region, the Western Isles, Orkney, Shetland and, in Strathclyde region, Argyll and Bute District and the Island of Arran). The board may encourage and assist industrial projects by acquiring land, building and leasing factories, promoting companies itself or with partners, taking shareholdings in existing companies, providing advisory and management services, and by way of grants and loans to industrial, commercial or agricultural concerns. In practice the board's power to give assistance by way of grant or loan is broadly similar to that of the Scottish Office under section 7 of the Industry Act: the board may however give special grants in certain cases which bring the volume of assistance beyond the normal level from public sources.

Factory building

Factories are provided through the English Industrial Estates Corporation and through the Scottish Development Agency, the Highlands and Islands Development Board and Welsh Development Agency. They may be advance factories or factories built to order; and rent-free periods may be given as an inducement. They are a valuable incentive to industry which greatly helps the steering of particular firms to the assisted areas. The Development Commission also builds factories (see page 542).

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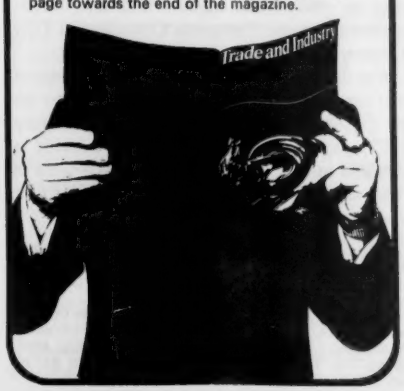


3 Special assistance to industry in Northern Ireland

Northern Ireland enjoys many of the benefits of special development areas in Great Britain and overall fares better than SDAs in terms of incentives to encourage industrial investment. Selective employment payments are considered to have had a more positive effect on employment than did their equivalent in Great Britain, the regional employment premium, and therefore the decision has been taken to continue the scheme in Northern Ireland.

Selective assistance to industry, where the purpose is to maintain or promote employment, is given under the Industries Development (NI) Act 1966.

The types of assistance under this head are:

1 capital grants towards building and equipment costs of between 30 and 40 per cent depending on the type of case and areas; these grants are not deducted from the company's expenditure when its tax allowances are calculated;
2 loans on conditions and at rates of interest similar to those offered in Great Britain;
3 interest relief grants similar to those available in Great Britain;
4 removal grants of up to 100 per cent of the cost of transferring machinery from outside Northern Ireland and up to 75 per cent of the cost within Northern Ireland;
5 employment grants as a special inducement on a per capita basis [5].

Standard assistance, where there are no conditions relating to employment, is provided under the Industrial Investment (General Assistance) Acts (NI) 1966-71 and comes in two basic forms:

1 Capital grants of 30 per cent towards expenditure on new machinery, plant, equipment and buildings in manufacturing industry.
2 Discretionary loans or interest relief grants for companies in receipt of capital grants for major rehousing and re-equipment schemes, up to a limit of 75 per cent of capital cost net of grant; loans are for eight to 15 years at the government loans fund rate (the same as the national loans funds rate) with a two-year interest-free period.

Northern Ireland Development Agency

The Northern Ireland Development Agency (Nida) was established by the Industries Development (Northern Ireland) Order 1976, which came into operation on 1 May 1976. By this order the Northern Ireland Finance Corporation (NIFC) was dissolved, and its assets and liabilities transferred to Nida. The main purposes of the agency are the development and assistance of the economy, the promotion of industrial efficiency and the provision, maintenance and safeguarding of employment. To this end it can, inter alia, acquire, hold and dispose of obligations incurred by other persons, promote publicity and provide an advisory service for industry. In carrying out those functions, the agency has a limit on its overall financial commitments at any one time of £50 million. In addition and under the direction of the Department of Commerce, the agency may grant aid to industrial concerns. The Local Enterprise Development Unit, which advises and assists small businesses in Northern Ireland, remains independent of the Nida.

[5] Under new measures announced on 1 August, the rate of selective capital grant referred to above was raised to 40/50 per cent; and a scheme was introduced under which grants are made for the research and development of new products and processes at a rate of 40 per cent to 50 per cent up to a limit of £250,000 per project.

4 Government support for research and product innovation

The government provides research support for industry mainly through work at government research establishments, such as the National Physical Laboratory, and the funding of programmes at research associations. The current expenditure by the Department of Industry on general industrial research excluding aerospace is in the region of £40 million per annum. There is also direct support for the development of marketable products by individual companies, through the placing of collaborative development contracts and pre-production orders. The NRDC is a source of funds to secure the development and exploitation of inventions arising both in the public and private sector and RNDC support has generated many hundreds of millions of turnover of successful projects. The NRDC by statute is required to break even financially taking one year with another, and is therefore not a source of cheap money for industry, but is akin to a merchant bank.

Some of the recent industry schemes under section 8 of the Industry Act described on page 539 (machine tools, printing and textile machinery, paper and board, and electronic components) have made provision to assist product development. The Department of Industry is currently considering widening the present scope of assistance for product development [6].

Advanced technical support

Advanced technical support has been given

[6] The government announced on 18 July 1977 that £20 million had been made available in the first instance under the Science and Technology Act 1965 to assist the development of new marketable products and processes by manufacturing industry. The assistance will cover development costs from the design stage up to the point of commercial production.

by the government on the development of Concorde – as well as financial assistance for production – and on research and development of aircraft and aero-engines, as well as other project assistance.

Special support for particular industries

Government support to particular industries includes, for shipbuilding, the home cost escalation insurance scheme, the performance bond scheme, and the recently announced intervention fund for shipbuilding; for steel, financial support on commercial terms for British Steel Corporation stockpiling; in the space and nuclear areas, the European Space Agency programme contribution, research and development at the Atomic Energy Authority on nuclear power stations and safety, and additional capital for British Nuclear Fuels Ltd; and, for the tourist industry, assistance with promotion under the Development of Tourism Act 1969 and formerly under the investment grant scheme, now closed.

Advisory and information services

A number of government services offer information, and advice and assistance to industry, including small firms information centres and low-cost automation centres and the pilot technology advisory schemes being operated in the non-ferrous foundries and pumps and valves sectors. Most of the Industry Act schemes described above include provision to assist small companies to use consultants to advise them on improving productivity and efficiency. There is also an experimental counselling service for small firms in operation in the south-west region.

The Development Commission

The Development Commission, and its subsidiary organisation the Council for Small Industries in Rural Areas (Cosira), provides assistance for small firms in rural areas. The commission is financed through a development fund (currently about £6 million annually), advances from which are made by the Department of the Environment.

Three main types of assistance are offered:

1 **Factory buildings**
In certain rural areas (both within and outside the assisted areas) which have severe problems of declining populations, outward migration and lack of employment opportunities the commission provides small factories in addition to Cosira services, ranging in size from small nursery units (500-2000 sq ft) to 15 000 sq ft.

2 **Credit facilities**
Cosira assistance is available for manufacturing and service firms situated in rural areas or small country towns and employing not more than 20 skilled persons. Loans may be made for equipment and/or buildings and/or working capital; and in the development areas loans are also available for tourist accommodation projects.

3 **Technical, advisory and training services**
Cosira provides courses at training workshops and locally on wood working, plastics, engineering and traditional crafts; offers advice and training in the management field; and finances certain apprenticeship schemes.

Financing of industry over the United Kingdom

Separate papers deal with finance for industry through the banks and other financial institutions. Industry's various requirements for finance obviously vary considerably throughout the UK. This depends for example upon assisted area status, but also on the industrial structure of the region concerned. As already mentioned in part 2, some regions have a predominance of large firms in heavy and declining industries, while in others, for example in the West Midlands, there is a predominance of small and medium-sized firms in light engineering, and in the south-west there are many service industries often with marked seasonal variations in the level of trade. Other structural differences include the importance of public sector industries, such as steel and coal, and the location of large multinational companies and of subsidiary companies of major UK companies controlled from a central head office. Nevertheless, these differences are not reflected in significant overall differences between the regions in arrangements for finance.

Because of the country's relatively small size, together with the operation throughout England and Wales of the major clearing banks, the concentration of financial institutions in London is not a handicap to large or medium-sized manufacturing firms. The needs of both large and smaller firms are catered for locally as many merchant banks and other institutions have offices in leading provincial cities, there are a few provincial-based merchant banks, and there are local stock exchanges. And industry in Scotland, Wales and Northern Ireland has access not only to English financial institutions but also to its own institutions, particularly in Edinburgh, Cardiff and Belfast.

New publications

Threat to sugar markets?

Is high fructose corn syrup a threat to world sugar markets? This important question affecting the international sugar market has led the Food and Agricultural Organisation of the United Nations to include a special feature on the subject in their latest annual review of the main agricultural and related commodities. The report goes on to look at the technical and economic background to this new substitute for sugar: its competitiveness could have implications for producers and exporters of sugar especially in developing countries.

The FAO review takes a general look at the international commodity scene, examining prices, trade, and the effects of international policies over the past year. Taking each commodity in turn, the review notes the major 'highlights' of the market, production, consumption, and price levels. Detailed figures are also provided – the latest available to FAO up to May/June 1977 – but most of the statistics only provide preliminary figures for 1976 and 1976/77. The short-term demand for the coming year is also discussed.

FAO Commodity Review and Outlook. 1976-77. Food and Agricultural Organisation of the United Nations. (112 pages. Available from HMSO. 1977. £5.20. ISBN 92 5 100353 X.)

Opportunities in S. America

Exporters of agricultural goods and services should be particularly interested in two reports, recently produced by the British Agricultural Export Council, covering comparatively unfamiliar markets – Bolivia and Peru. Both reports were written by a member of the council staff who personally visited each country earlier this year.

The author adopts a very down-to-earth approach, describing the situation exactly as he found it. Useful background information is provided on the economics of each country, as well as details of potential markets. Data on project work, developments in agriculture, and consultancies is provided in some depth. A useful addition to the list of potential representatives, are the names of individuals who may be contacted personally.

The appendices include detailed statistics, lists of addresses, telephone and telex numbers and a copy of the visit programme.

For the potential exporter engaged in any agricultural or related field or for anyone considering venturing into this area, who is interested in the South American market, these publications should prove invaluable. Perhaps compilers of similar export publications may learn something too.

Agricultural Opportunities in Bolivia. British Agricultural Export Council. (37 pages. British Agricultural Export Council, 35 Belgrave Square, London SW1X 8QN. 1977. Paperback. £3.00.)
Agricultural and Infrastructural Development in Peru. British Agricultural Export Council. (29 pages. British Agricultural Export Council. 35 Belgrave Square, London SW1X 8QN. 1977. £3.00.)

EEC market intelligence

With its latest publication covering the German and Italian legal framework relating to commercial agency and distributon agreements, the European Commercial Law Library, series reaches volumes 7 and 8.

Similar in approach to previous volumes this series (reviewed in *Trade and Industry* on 10 October 1974, page 60 and on 29 July 1977, page 172), these new titles provide a detailed insight into the legal requirements of two important EEC markets in this vital link in the export chain.

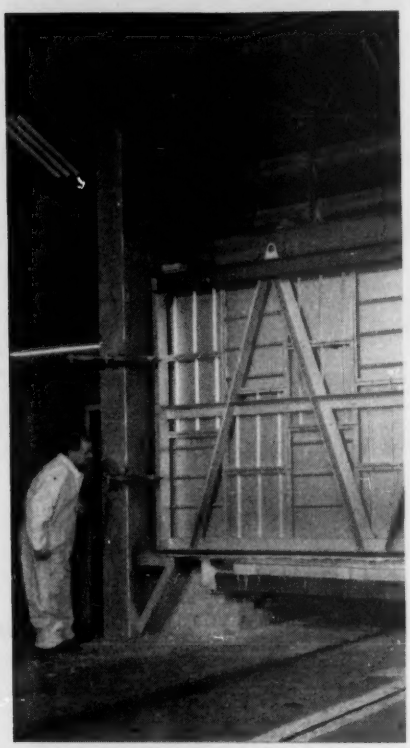
The German Law of Agency and Distributorship Agreements, by Fritz Staubach. European Commercial Law Library No. 7. (267 pages. Oyez Publishing Ltd. 1977. Paperback. £12.50. ISBN 0 85120 314 0.)
The Italian Law of Agency and Distributorship Agreements, by G. La Villa and M. Cartella. European Commercial Law Library No. 8. (217 pages. Oyez Publishing Ltd. 1977. Paperback. £12.00. ISBN 0 85120 301 9.)

New products

Freepost reader service

For further information on items in this section, circle the corresponding number on the reader services page near the end of the magazine.

Lightweight furnace doors



Useful savings in fuel consumption and improved furnace efficiency can be achieved with existing plant by fitting new furnace doors, built from 'Clinotherm' refractory fibre-faced panels supplied by Hotwork Development Ltd of Dewsbury. This system of prefabricated modules, which are simply bolted together, provides a lightweight, well insulated furnace door of the desired size and shape with excellent sealing facility. Ingress of cold air or convective heat loss (dependent on furnace suction or pressure) can be virtually eliminated, thereby curing one of the most prevalent sources of furnace heat loss.

Further information: circle 758

Film thickness monitor

Many vacuum deposition processes require the control and indication of increasing film thickness during the deposition cycle.

Nanotech of Prestwich has now introduced the model NQC1 digital film thickness monitor as an economical instrument for this purpose. The deposited film thickness is read directly on a 4 digit LED display, a thumbwheel switch allows the density of the material being deposited to be entered to ensure the correct thickness reading using any deposition material.

The thickness of the deposited material is measured by the alteration in the resonant frequency of a quartz crystal located close to the material being coated. The maximum thickness that can be measured before replacing the crystal is equivalent to 12 microns (0.0005 mm) of aluminium or proportionately less for more dense materials.

Further information: circle 759

Protecting offshore pipelines

A new scour prevention system designed primarily for the protection of offshore oil and gas pipelines has been developed by Linear Composites Ltd, an ICI subsidiary.

The new system is already in use on a trial section of the pipeline from the Piper field where it has been installed in about 150 m of water by the operators, Occidental of Britain Inc.

The system consists of bunches of polypropylene strands locked into a synthetic 'mat' at intervals of about half a metre.

As polypropylene is lighter than water, the strands float upwards forming a 'curtain' which not only reduces the velocity of the water in the immediate vicinity but also causes small waterborne particles of sand and silt to drop to the seabed where they start forming a permanent artificial sandbank.

By laying a strip of the material on either side of a pipeline, it becomes possible to cause the pipe to eventually become completely covered with sand, reversing the normal natural process which, in many instances, can lead to serious erosion problems.

Less than a month after the trial section was installed on the pipeline from the Piper field, Lawrence-Allison and Associates Corp, management engineers for Occidental's Piper project, reported that there was already evidence of a substantial build-up of sand.

The 'mat' which forms the anchorage for the bunches of polypropylene strands is produced by interviewing 'Paraweb' and bonding it to a backing of 'Terram', ICI's water-permeable membrane for civil engineering.

Developed by ICI, the basic 'Paraweb' is a strong and immensely durable webbing-like material composed of parallel (untwisted) filaments of high tenacity 'Terylene' embedded in 'Alkathene' polyethylene. A 'mat' is formed by weaving strips approximately 5 cm wide and then welding the warp and weft webs together ultrasonically at the edges to give the structure stability.

Further information: circle 760

Water jet blasting strips paint

Babcock Kina Ltd of Hadleigh developed two high pressure water jet blasting units specifically designed to meet the needs of the world's offshore gas and oil industries. They can be used for the cleaning and stripping of paint above the water line to enable re-coating of structures as well as for the removal of marine growth and wet abrasive exposure of welds on underwater structures, to allow complete inspection to be carried out.

The life of coatings can be increased by the removal of salt deposits between coatings through the use of clean water jet blasting.

The basic unit consists of a Babcock Kina triplex high pressure water pump supplied with water at a positive head from a tank fed from a fire main or other suitable water supply. A metering device can be incorporated into the tank supply to allow precise control of detergents or inhibitors if required.

The pump is driven by an air-cooled Lister HR6 marinised engine fitted with variable speed control, spark arresting silencer, and manual clutch, which can be operated by one man. It is enclosed in a robust box section cage with a single central lifting eye.

Further information: circle 761

Mini cylinders

A range of mini pneumatic cylinders has been introduced by Enots Ltd of Lichfield the pneumatic control specialists. Known as the 10/12 range the cylinders have a bore of 12 mm.

The cylinders have stainless steel piston rods with barrel and end mounts made from aluminium alloy and seals from nitrile rubber.

They can operate in a temperature range of -10 to $+70$°C and working pressure for 0 to 10 bar.

Single-acting and double-acting versions of the mini cylinders are available. The single-acting version has a piston rod which is square in cross-section making it particularly suitable for textile, printing and precision assembly applications where it is important that the attachment does not turn.

The single-acting version is available in 15, 25 and 50 mm stroke lengths. The double-acting model has stroke lengths of 15, 25, 50, 80 and 100 mm but is also available to suit customers requirements up to 320 mm.

Further information: circle 762

Technology news

Building research – integrity and energy savings

Introducing the Building Research Establishment annual report, published last week, James Dick, director of the establishment said 'An area where expansion is proposed is concerned with the overall integrity of buildings and this is regarded as a priority subject which should go ahead as planned'. Building failures in recent years had caused much concern within the industry, to the Department of the Environment and to the public. Many had resulted in costly remedial measures; some had caused deaths. The new building integrity division had been set up during the year to strengthen the research base to which those responsible for executive action to reduce building failures could look for guidance. He said that the division would act as a focus for research and related activities aimed at eliminating or reducing failures likely to affect safety or entail substantial cost in repair or replacement. It would try to assess possible risk areas in both new construction and existing buildings, and would be concerned particularly with innovation and the assessment of the desirable balance between economy and risk. The research programme would involve analytical and field investigations and would entail close co-operation with existing specialist research within BRE and elsewhere.

Another recent introduction in the research programme was the work to help construction exports and here again the planned expansion would be maintained.

Work on foundation problems of oil rigs in the North Sea is also expected to continue together with the BRE contribution to aid for developing countries.

Unfortunately cuts in public expenditure will mean a 10 per cent reduction in the staff at BRE by April next year. However it is hoped that this will not affect the programmes on housing and planning and on energy. On energy conservation in buildings, a considerable team has been already engaged and is making good progress.

The second noteworthy feature of 1976 which had provided a background for BRE research was the continuation until September of the drought which began in May. Concern about the drought highlighted not only the need for adequate water reserves but also the need to conserve the country's water resources. Previous research on the various uses of water in buildings enabled BRE to put forward ideas that would eventually reduce consumption. The research programme was increased to provide further development of the most promising possibilities.

The drought had also affected the buildings themselves: the most serious problems had been those of cracking in buildings constructed on shrinkable clay. The foundations had been affected as the clay dried to a very low moisture content and owners had the worry of seeing considerable cracks develop. From experience of failures reported under less severe conditions, BRE had been able to advise that some of the cracks would reduce when the winter rains caused the ground to swell and return to its normal condition. Other more severe cracks might warrant specialist consultation.

Moisture content had also become very low in building materials. Timber dried out to very low limits and sticking reported in doors and windows was often due to subsequent distortion of the timber rather than any movement of foundations and structures. The timing of the major failure of the trussed rafter roof in the school at Birkenhead during the year had been probably associated with distortion of the wood following the hot sunny spell, Mr Dick said. The extreme conditions also produced abnormal expansions in building elements and this, coupled with higher rates of deterioration of some surface finishes had meant that when the rains came there had been many cases of rain penetration.

Accidents in the home

The report points out that there are between 6000 and 6500 fatal accidents in the home each year, not many fewer than deaths on the road. In view of these large numbers, BRE research has been aimed at providing descriptive statistics relating accidents to building features and at understanding the effects of particular hazards. The object is to develop preventive measures applicable in the present or new stock of dwellings, including making new building regulations if necessary.

The Department of Prices and Consumer Protection is currently developing a national accident surveillance system. BRE has been able to help by making available experience gained in its pilot exercise.

Sound insulation

In a survey of the sound insulation performance of party walls between new dwellings, started by BRE in 1971, the insulation of 1270 walls has been measured. The sample provides a fairly representative picture of the insulation levels recently and currently achieved and suggests that rather more than half of the houses have a performance which is below what might be expected from their design.

Water economy

BRE research on water consumption for domestic use was given added impetus during 1976 as a result of the drought. The research aims to develop water services which perform satisfactorily and use less water. Those which show a cost benefit may provide an alternative option to the longer-term development of new water supplies and the associated distribution and sewerage

Copies of the report, 'Building Research Establishment 1976', are available from HMSO price £3.00 (26p postage).

Window blind saves energy

This prototype window blind prevents heat loss in winter, heat gain and glare in summer and reduces noise. In commercial premises fuel savings of 35 to 40 per cent are claimed, with outlay costs recovered in under five years. Produced by Lockstoke Developments, of Midhurst, for licensed manufacture overseas, the Thermohush blind consists of three or more layers of translucent flexible plastic film about 50 mm apart, with each layer folded horizontally, concertina-fashion. Layers are fitted to a rigid horizontal sheet secured to the top of the window frame and to a similar sheet at the bottom of the blind. Various colours can be used and cords passing over pulleys allow opening to any desired degree.

Further information: circle 763

requirements. The work includes feasibility studies and laboratory and field trials of performance and costs.

Domestic solar water heating

Although the price of a professionally installed solar water heating system is high compared with the reduction in fuel bills that might be achieved by the average household, £400 to £500 for an annual saving of not more than £30, a small but flourishing solar water heating industry has developed over the last two years. About 30 firms are active and standards need to be developed in order that the mechanical integrity of collectors may be assured and the thermal performance of different models compared by standardised procedures. BRE research on solar water-heating systems is in part aimed at the development of such standards, and includes participation in comparative tests of collectors in EEC countries.

A standard for solar water heaters would include: defined test procedures for determining the thermal efficiency of a panel; a calculation procedure for estimating the performance of a system from the test results; and requirements to ensure satisfactory standards of construction and installation.

Experimental rigs for determining the thermal efficiency of collector panels are now in operation at BRE. These measure the rate at which a panel gains heat when exposed to natural sunlight. Panels are tested at ambient and elevated temperatures, and heat loss measurements form part of the programme. These are relevant to the first part of the standard. The calculation procedure will be derived from computer simulation studies of solar water heating systems. A model has been devised and to validate its predictions two domestic size test rigs, each with about 3 m² of solar panels and a 160-litre pre-heat tank have been set up. These, fully automated so that data can be collected over periods of months, can investigate the effect of changing parameters on system performance and compare the measured effects with those predicted by the model.

Work relevant to the last part of the proposed standard includes an investigation of the life of aluminium collector panels in a mixed copper/aluminium system, where corrosion is likely to occur, and the design and monitoring of several solar installations, including one at Tunbridge Wells girls' grammar school.

Pitched roofs

The overall stability of pitched roofs, particularly those of timber construction, has given rise to concern in recent years. There have been cases, mainly with trussed rafter roofs, where instability has resulted in movements of the roof structure, damage to gable walls, incipient failures, and in one case complete roof failure. Many potential failures have been averted because the progressive movements in the structure have been recognised in time and the necessary remedial action taken.

A pitched roof is a three-dimensional structure and is required to resist forces in directions other than the plane of the primary components. Most roof components, eg trussed rafters, are designed to withstand forces in their own plane and are designed without detailed knowledge of the total structure of which they are a part on the assumption that adequate lateral restraint will be provided to resist buckling of the compression members. It is essential, however, at some stage to consider the roof as a complete structure and to assess what measures need to be taken to ensure that the assumptions made in the design of the individual components are translated into practice, and that any other necessary restraints are incorporated in the structure.

The need to ensure the overall stability of trussed rafter roofs has been recognised in the last few years. Roof bracing of the type recommended by the Truss Plate Association is now widely used in trussed rafter construction for houses but there is increasing use of components such as trussed rafters for larger buildings, schools, hospitals, public and industrial buildings, where loadings and other conditions are substantially different from domestic roofs. It is in this wider field that problems have arisen and in which overall roof stability becomes a major consideration. Current BRE research on structural interaction and overall stability of roofs will assist in this, and a survey is being made of the extent to which large span trussed rafters are being and will be used to assess the potential extent of the problem.

Further work on interaction between components in building, which includes masonry wall/timber roof interactions, will assess the design requirements in this field. Meanwhile recommendations on gable wall to timber roof connections have been prepared by the Timber Research and Development Association in collaboration with BRE and other interested parties to provide interim guidance on how the requirements of the building regulations in this respect can be met for domestic roofs.

Hazard from toxic and explosive gases

Statistical evidence collected over a period of years has shown that it is the burning of the contents of buildings that is the principal factor causing fatalities in fires. Current research into the smoke and toxic gases produced from combustible materials has been directed primarily towards the burning of furniture and bedding, particularly those containing a high proportion of plastics. Work at the Fire Research Station has been supplemented by extensive extra mural research.

At FRS full-scale fire tests involving various types of foam and covers in simulated furniture have been carried out for the Property Services Agency of DOE. The work has confirmed the importance of a correct choice of covers and foam and the value of flame retardant interlinings between foam and cover. An important part of this work has been the development of fire performance criteria for the contract purchase of furniture for government departments.

Laboratory pyrolysis experiments have been carried out to study the decomposition mechanism and product formation of polyisocyanurate foams and polyacrylonitrile. To enable more information to be obtained on the decomposition mechanism and smoke formation of plastics material, a highly sophisticated gas chromatograph-mass spectrometer unit is being installed at FRS.

The generation of toxic gases from smouldering furnishings, soft toys and other household effects has been the subject of specific investigations on behalf of various government departments. A pathological study which has been initiated at Glasgow University should help in identifying the precise causes of deaths in fires.

Reclaiming aluminium

The Maxi-Melt made by Chine Furnaces of Lewes, Sussex, shown here with its simple tap pouring system for casting ingots. From irony aluminium of approximately one-third aluminium to steel, 1-tonne aluminium ingots can be produced by one operator in a single shift.

Further information: circle 764

Laser probes cylinder bores

Of particular significance to the automobile industry is a technique developed by Sira Institute Ltd, in collaboration with Girling Ltd, for the inspection of internal bores of brake cylinders. The technique is aimed at replacing present inspection methods involving visual assessment for detecting surface damage and to check positions and dimensions of holes or ports. Sira has for many years been concerned with methods of assessing the surface properties of materials, and in particular has extensive experience in the development, use and supply of electro-optical scanning systems for on-line surface inspection of such products as metal sheet, plastics and paper. These techniques have now been extended to inspection of internal cylinder bores by means of a novel form of electro-optical probe.

The probe is inserted in the cylinder under inspection and rotates at high speed, projecting a spot of laser light on to the internal cylinder surface. Light reflected by the surface is picked up by the probe and passed to a photodetector. Simultaneously with the rotation of the probe, the cylinder is moved linearly along its axis at constant speed. Hence the internal surface is scanned across its entire area by the light beam. The photodetector output is processed to give information about the presence of surface features such as cracks, scratches and holes.

Extensive tests of the prototype system on automobile cylinders of varying surface roughnesses and surface characters have been carried out by Girling, who were able to detect all the main defects of interest, such as scratches, fine turning marks, tool withdrawal marks and surface corrosion, in addition to checking positions and sizes of ports. It was also found possible to detect differences in the instrument output due to varying degrees of surface finish for surfaces of a given character. The present system has a resolution of 100 μm and operates at a rate of 25 mm length of cylinder per second. The system could readily be adapted to give a resolution at least as good as 25 μm.

Sira believes that systems of this type could be used to inspect not only brake cylinders but also a wide range of other products, such as engine cylinders, hydraulic systems, bearing surfaces, machine tools and weaponry. The same system, but without the rotating mirror at the end of the probe, could also be used for scanning over flat mechanical surfaces, and could be particularly useful for inspection of surfaces in positions where access is restricted.

As the market for electro-optical systems expands, the need for quality assurance in optical engineering becomes more widespread, the variety of test instruments increases, and practical instruction courses in measurement technology become more necessary. The quality assurance engineer needs practical guidance on the most appropriate and economical techniques to satisfy his particular present and future needs, for instance, to help him to decide when it is necessary to purchase new equipment, when existing equipment should be modified, or which specifications are appropriate.

Sira provides this guidance in practical courses, each structured to meet the particular needs of a small group of engineers who receive personal tuition from senior staff at Sira, undertake practical exercises, and also participate in group discussions. The content of each course is established in discussion with participants' employers so as to be of maximum value to participants in their work.

Further information: circle 766

Recovering non-ferrous metals

First designers, then engineers, then reclamation operators, Ken Wheeler and Ivor Pearsall demonstrate their machine the Airomatic, which can reclaim metal from most types of non-ferrous residues. Wheeler and Pearsall (Machines) Ltd of Telford showed the system at a recent anti-waste exhibition.

Further information: circle 765

Sludge dewatering

Sludge Dewatering Ltd has been awarded three contracts by the Property Services Agency for the supply and installation of Biospiral package treatment plants.

One is for the provision of a 34 m³ capacity plant to handle raw sewage from a rehabilitation centre, housing and motel at Stormy Down, Porthcawl, in Wales, serving a population of about 200 persons.

The second plant is to serve a population of roughly 160 persons at a capacity of 17 m³. The Biospiral will treat laboratory waste and domestic sewage from a research laboratory at Trawscoed, Aberystwyth.

The third contract is for a 500 population equivalent plant to supplement an existing treatment plant serving Oakington Barracks.

The Biospiral package sewage treatment system consists of a rotating disc biological filter assembled in the form of an archimedian screw followed by an automatic drum filter for the removal of suspended solids. The plant has the advantages of low operating and maintenance cost while having the ability to handle fluctuating flows without detriment to the final effluent standard. The Biospiral system, which ideal for hot climate locations, is in demand in the Middle East where provision is made to re-use the effluent for irrigation, or to provide further treatment to make the effluent suitable for re-use as washwater and similar applications.

Sludge Dewatering Ltd has now been absorbed by Dickson Environmental Engineering Ltd, Guildford, who will continue to handle the future trading activities of the company.

Further information: circle 767

Anti-stammer device

A team in Edinburgh, have invented an electronics device which could help to cure stammering.

A combined effort by speech therapist Mrs Ann Dewar, her doctor husband and lab superintendent Jock Austin, both of Edinburgh University's physiology department, and Dr Harry Brash of the medical department has resulted in the design of a small black box with a 90 per cent anti-stammering success rate.

'Probably well over one in a hundred people,' says Ann Dewar, 'suffer from a stammer which can make it a sheer misery to do simple things like making a phone call or even buying a train ticket.'

Now, the 'Edinburgh Masker', will be manufactured commercially by a local firm, Findlay Irvine Ltd, of Penicuik.

The new device, which will only be used on the professional advice of a doctor or speech therapist, operates on the principle that a stammerer often seems to lose his speech impediment when near certain types and levels of noise such as a waterfall, which tend to mask his hearing of his own voice.

Consisting of an electronic box about $3\frac{1}{4}$ in × $2\frac{1}{2}$ in × 1 in linked to a small sensor on a band round the neck and small earphones which do not prevent him hearing, the device creates a masking sound as soon as the patient's own vocal chords start to move. The immediate result, in most cases, is a vast improvement in fluency.

'While it is no miracle cure for stammering,' says Ann Dewar, 'we are very pleased with results so far and would like to see it made more generally available.' Two one-day conferences for speech therapists and others involved are planned by the university's physiology department for 28 September and 22 October.

Further information: circle 768

Road research: not all on the surface at the Transport and Road Research Laboratory

Some projects at the Transport and Road Research Laboratory are concerned with road surfaces, and with maintaining quality while at the same time making the best use of available resources.

Aggregates with high resistance to polishing are essential for surfacing heavily trafficked roads in order to maintain skid-resistance. A TRRL review has established that Britain has large resources of this type of natural-rock aggregate, spread through Wales, Northern Ireland, Southern Scotland, Salop, Devon and Cornwall. Furthermore, bauxites having high alumina (over 65 per cent) and low silica content (less than 10 per cent) can be calcined to produce aggregates of even greater polishing and abrasion resistance. TRRL has also identified synthetic aggregates which, while more expensive than natural-rock are cheaper than calcined bauxite.

Worn concrete roads can be re-textured by cutting transverse grooves but this is both costly and laborious. The laboratory has demonstrated the feasibility of applying single surface dressings using three different binders. Loss of surface texture depth by embedment (as with bituminous surfaces) does not arise, but it is essential to minimise wear of the chippings by traffic. Recommendations for maximum permissable aggregate abrasion value of chippings for concrete surface dressings have been made, and are more stringent than for black-top surfacings carrying similar traffic.

In an attempt to conserve better quality materials, incinerated domestic refuse has been added to the list of alternative products already considered (colliery shale and pulverised fuel ash) which could be used in road construction. Thirty-three incinerators in England produce about 1 million tons of residue (10 per cent of original weight of waste) from domestic refuse per year within urban areas. This residue, having mainly clinker and glass content, but little ferrous metal, has considerable roadmaking potential for bulk fill purposes and some may be suitable as type 2 granular sub-base. Produced in urban areas, its use in urban road construction has obvious advantages.

A two-year study of all road traffic accidents whose casualties were received at one hospital showed that 42 per cent of the vehicle occupants wearing seat belts received no injury, and only 5 per cent received severe or greater injuries. This compared with 28 per cent of unbelted occupants who escaped injury and 10 per cent who received severe or greater injury. These early results give a clear-cut indication of the effectiveness of seat belts.

Accident-experience has confirmed that vehicles are not always contained by central reserve safety fences and bridge parapets designed to current standard strengths. A study of shaped concrete barriers installed as central reserve barriers and as parapets in the USA showed that although large American cars did not overturn after severe impacts with them, smaller European cars might well do so. Tests sponsored by the laboratory at the Motor Industry Research Association are designed to modify US concrete safety barriers to meet UK standards so that they can be used in appropriate situations.

Two experiments in which subjects from the general public drove between given destinations on self-selected routes showed that distances travelled were at least 4 per cent longer than necessary. The excess was unwitting and not caused by congestion or getting lost: rather, it was due to limitations in maps and roadsigns, and to the limited extent to which maps and roadsigns are used by the motorist. Preliminary estimates of cost and benefit show that a project for equipping 40 000 junctions with an automatic route guidance system which could supply information on destinations requested by motorists on in-car units, is worth more detailed consideration.

Results are now becoming available of a large scale road trial in which 50 hazardous sites had been selected for yellow bar experimental carriageway markings, designed to encourage drivers to slow down in the face of known hazards; the successive line separations decrease as the hazard is approached. Data so far from 37 sites shows a decrease in relevant accidents at 29 sites, no change at six and an increase at the other two. Overall relevant accidents have been reduced by nearly two-thirds.

During the winter of 1975/76 the laboratory installed equipment on the M4 to record all vehicle speeds under fog conditions and to photograph vehicles from the rear. Drivers, who could remain anonymous, were contacted from their vehicle registrations through a third party. At 50 m visibility more than half the drivers in the middle and outer lanes (the nearside lane was not monitored) were exceeding the speed from which they could stop in 50 m (using the Highway Code figures for good driving conditions). Six hundred owners were sent questionnaires, and 76 per cent were returned; this indicates the willingness of the public to co-operate in such research.

The overseas unit of TRRL has led a working group set up by the OECD steering committee for road research and the OECD development centre, to produce guidelines for appraising rural road projects in developing countries. The OECD report suggests a broadened methodology, based upon ideas put forward by the World Bank, for examining proposals for rural roads in developing countries, in which such low traffic volume roads should be considered as part of a comprehensive rural development plan.

The laboratory is also working to gain a better understanding of the urban poor in Asia. One example is a comprehensive study made in Chieng Mai of forms of public transport to meet their needs. In this city the second largest in Thailand with a population of 100 000, a fleet of minibuses (silors) accounts for about 90 per cent of the 225 000 single daily transport trips within the city, using flexible routes. A conventional bus system and rickshaws (samlors) account for the rest. The minibus system may work well in this size of town, but for larger towns it is felt that buses on fixed routes and rail systems would be needed.

Studying earth climatology satellite

British Aircraft Corporation, Electronic and Space Systems at Bristol are studying aspects of a new climatology satellite for the European Space Agency, under a six month contract from the main contractor, Dornier System. The sun-earth observatory and climatology satellite (SEOCS) will be designed to study the factors which determine long term changes in the earth's climate.

BAC are defining and analysing the satellite's attitude and orbit control system which ensures that the satellite is put into the right place and maintained in the correct orbit, and are also investigating the design of the solar panels that will power SEOCS throughout its lifetime.

The world's climate at any particular time represents the 'average' of the various elements of the weather: it has changed in the past and can be expected to do so again. However, little is known of the mechanisms involved in changing the climate, which includes the effect of man-made changes to the environment.

The proposed satellite system will make simultaneous measurements of the total energy being received by the earth from the sun, and the energy being radiated or re-emitted by the earth. Detection of long term changes in this energy balance requires measurements to be taken with an accuracy significantly better than has previously been achieved and the present study is concerned with the feasibility of doing this. A satellite-borne system, with the spacecraft in high latitude orbit, is essential in order to get the frequent global measurements that are needed.

Further information: circle 769

Air bags keep craft afloat

J. W. Automarine of Holt in Norfolk designed this aircraft recovery bag (ARB1) for a variety of salvage and rescue work. With its lifting capacity of 2200 lb, the ARB1 can raise any hollow object – for example, a diving bell or a submersible vehicle – which has been disabled underwater. In this case the bags are an added aid to the safety of a helicopter fleet that services oil rigs in the North Sea.

Further information: circle 770

Overseas trade news

Japan to use UK waste disposal technology

Two regional treatment centres to be established in Japan for the British Sealosafe system of processing hazardous and toxic waste. This was announced by Stablex Ltd of London, developers of the process, at the environmental engineering and technology exhibition held in the British Overseas Trade Board's Export Marketing Centre in Tokyo, 6 to 10 September (see page 558).

The Sealosafe process converts liquid, solid and sludge industrial waste into an inert synthetic rock which can be used in land reclamation.

The plants to be constructed by Jepco (Japan Environmental Protection Co) for clients near Tokyo and Nagoya, will be the first to use the Sealosafe system overseas.

The president of Jepco, Dr Urata, said he was delighted that the Sealosafe process had surpassed the Japanese environmental standards.

Aid for Tanzania and Botswana

Two further allocations of British aid – for Tanzania and Botswana – have been announced by the Ministry of Overseas Development.

Britain is to provide £4.3 million from aid funds over the next five years to help a rural development project in the Tabora region of west central Tanzania. The project will also be financed by the World Bank and the Tanzanian government.

British funds are to be concentrated on road construction and land use planning. Six British experts will be working on the road programme, backed up by substantial UK equipment, and eight will be involved on the land use planning side. Training local staff is to be an important element of the project.

One of the major aims of Britain's aid programme to Tanzania is to increase smallholder production and to help the country to become self-sufficient in staple food crops. Most of Tabora region's 800 000 population are involved in smallholder farming, but only one tenth of the land area suitable for agriculture is being cultivated. Also, road conditions in the region have deteriorated badly in the last few years and are hampering development.

Judith Hart, Minister for Overseas Development, has approved an allocation of £1 million from capital aid funds to the Botswana government, for on-lending to the Botswana National Development Bank, primarily to provide loans for small-scale farmers.

The most pressing problem for rural development in Botswana is to provide employment and a sustained income for the majority who have few or no cattle. As about 90 per cent of the population of 700 000 live in the rural areas, and much of the country is unsuitable for arable agriculture, the most efficient land use is extensive ranching on a large scale. This, however, means that the bulk of rural income goes to a relatively small number of large-scale cattle owners. Therefore, the cornerstone of Botswana's rural development strategy is the tribal grazing land policy which aims to allocate land on a long-term basis to individual commercial ranchers, while reserving substantial communal grazing areas for the smaller owner.

Two major current British aid projects are for research and evaluation of suitable farming systems leading to possible future rural development area projects; and financing a major reorganisation of the extension service. The £1 million allocation aims to complement these.

UK firms gain £11m from aid in August

British industry received some £11 million in August from orders following grants and loans to developing countries, made by the Ministry of Overseas Development and administered by the Crown Agents.

The following were among the largest contracts accepted for financing in August, including earlier contracts now accepted for re-imbursement from aid funds:

Jute processing machinery and parts for Bangladesh (£457,537) from James Mackie and Sons Ltd, Belfast; electrical transformers for Bangladesh (£2,200,280) from Ferranti Engineering Ltd, Chadderton, Oldham; a wool-combing plant for India (£175,645) from Petrie and McNaught Ltd, Rochdale; flameproof switchgear for India (£484,722) from GEC Switchgear Ltd, Manchester; low-density polythene film for India (£106,334) from ICI Ltd (Plastics Division), Welwyn Garden City; a microfilm printer for Kenya (£29,576) from Ozalid Group Ltd, Loughton, Essex; steel sleepers for Kenya (£21,168) from BSC (Exports) Ltd, Workington; railway fastenings for Kenya (£38,790) from G. Cooper (Sheffield) Ltd, Tinsley, Sheffield; vehicle spares for the Sudan (£443,950) from B. Ashworth and Co Ltd, London; tyres, tubes and flaps for the Sudan (£88,834) from Dunlop Ltd, London; tractors for Tanzania (£82,028) from Ford Motor Co Ltd, Basildon, Essex.

The orders for the items for Kenya, the Sudan and Tanzania were placed by the Crown Agents.

Scottish chambers sponsor SE Asia oil mission . . .

Singapore and south-east Asia is the target for an oil-related mission sponsored by the Scottish chambers of commerce from 18 to 25 February 1978. The timing of the mission will coincide with the major offshore south east Asia exhibition, scheduled for 21 to 24 February 1978 in Singapore.

The programme of the mission, which will be based in Singapore, will be flexible enough to allow participants to visit neighbouring states such as Indonesia, Malaysia, Thailand. There are several package tours available and in addition Apex fares can be booked either on a return basis or by coupling two one-way tickets.

The Dundee, Edinburgh and Glasgow chambers have agreed to co-ordinate trade missions in future and to arrange a single programme, which will be made available to exporting firms in all Scottish chambers. This mission is being managed by the Dundee and Tayside Chamber of Commerce and Industry and full details are available from: Mr John Aitken, Deputy Director, Dundee and Tayside Chamber of Commerce and Industry, Chamber of Commerce Buildings, Panmure Street, Dundee DD1 1ED, tel. 22122.

. . . and one to Saudi Arabia

The chambers are also sponsoring a mission to Saudi Arabia from 9 to 20 January, 1978.

The itinerary will include Jeddah, Riyadh and Dhahran and a financial subsidy of £200 is available to approved companies from the British Overseas Trade Board. The mission will be managed by the Dundee and Tayside Chamber of Commerce and Industry and the cut-off date for applications is 1 November.

Further details from Miss Linda Dodds, Assistant Secretary, Export Promotion, Dundee and Tayside Chamber of Commerce and Industry, Chamber of Commerce Buildings, Panmure Street, Dundee, tel. Dundee 22122.

Polish airport closed

Because of repairs being carried out to the runway at Warsaw international airport, it will be closed from Sunday, 25 September to Thursday, 29 September, inclusive.

Nigerian curfew

Business visitors to Port Harcourt should note that a curfew is in operation between 2200 hours and 0500 hours until further notice.

ECGD backs Natwest line of credit to Bulgaria

A £3 million line of credit which National Westminister Bank has made available to the Bulgarian Foreign Trade Bank has been guaranteed by the Export Credits Guarantee Department.

The loan will help finance contracts placed in the UK for capital goods and associated services. UK exporters will receive 85 per cent of the contract price from the loan after shipment of goods; the remaining 15 per cent is payable from the buyer's own resources. To qualify under the terms of the loan a contract must have a minimum value of £20,000 and be placed by 6 September 1978.

This is the fourth ECGD-guaranteed line of credit made available by National Westminster Bank to the Bulgarian Foreign Trade Bank. Contracts placed under previous lines have included a wide range of plant and machinery.

Exporters requiring further details of this facility should contact Mr D. De Silva of ECGD (tel. 01-606 6699 ext. 7575) or Mr. R. H. Clarke of National Westminster Bank (tel. 01-588 6122 ext. 2805)

Seminar on airborne equipment for agriculture

A seminar on techno-economic trends in airborne equipment for agriculture and other selected areas of national economy is being held by the United Nations Economic Commission for Europe in Poland during 1978.

At a preparatory meeting to discuss the arrangements to be held in Geneva early in November, the UK will be represented by Mr J. E. M. Lilley of the Department of Industry. Mr Lilley would like to hear from organisations and individuals with an interest in the subject.

He can be contacted preferably before the end of October at Department of Industry, Economics and Statistics Division 3, Dean Bradley House, 52 Horseferry Road, London SW1P 2AG, tel. 01-212 6873.

Hints to business men booklets

Revised editions of the booklets on Ecuador and Trinidad and Tobago have been published in the *Hints to business men* series. British business men who intend visiting these countries on export business can obtain copies of the booklets from Export Services and Promotions Division, Department of Trade, Room D 05, Export House, 50 Ludgate Hill, London EC4M 7HU, tel. 01-248 5757 ext. 7146, or any regional office of the Department of Industry.

Advertisements are accepted for all booklets in the series which covers over 100 countries. Inquiries about advertising should be addressed to Cheiron Press Ltd, 8/10 Parkway, London NW1 7AD, tel. 01-267 1285.

African agriculture equipment fair

Dakar, Senegal, is the venue for the first African agricultural equipment and irrigation exhibition from 1 to 7 December 1977.

The exhibition covers the following sectors: Water including water resource studies, treatment of drinking water, waste water, equipment for domestic consumers, water as used in energy sources; agriculture including agricultural power units, equipment for working soil, sowing, planting and distributing manure; equipment for crop protection, harvesting, dairy work, handling and transporting agricultural products; equipment for land reclamation and soil conservation, etc; forestry and green spaces; processing of agricultural and forestry products.

Interested firms should contact the Senegalese Embassy, 11 Phillimore Gardens, London W8 7QG for further details.

Seatag hosts dinner for new Philippine ambassador

Pictured at a dinner given on 13 September by the British Overseas Trade Board's south east Asia trade advisory group (Seatag) for the new Philippine ambassador are (from left to right) Madame Stilianopoulos; José Stilianopoulos, the new ambassador; Sir Frederick Catherwood, chairman of the British Overseas Trade Board; Mrs Rooney; and Denis Rooney, chairman of Seatag. Other guests included Seatag members, David Gravell, Victor Paine and John Wilson, Murray Simons of the Foreign and Commonwealth Office, Robert Kemp of the Export Credits Guarantee Department, Christopher Roberts and Peter Bryant of the Department of Trade and Seatag's secretary Andrew Sanders.

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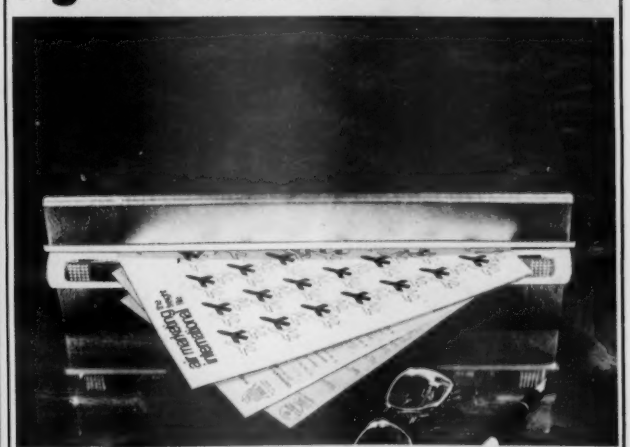


ENCIRCLE TI 596 ON PAGE 592 FOR FURTHER INFORMATION

Gregor MacKenzie visits United States

Gregor MacKenzie, Minister of State at the Scottish Office, started a week's tour taking in Houston, Atlanta and Dallas on 17 September. The visit included a series of meetings with executives of companies involved in the oil and other industries to encourage increased investment in Scotland.

The visit, which is the second by a Scottish Office minister within two weeks, follows that of Bruce Millan, Secretary of State for Scotland, to New York, Cleveland and Chicago.

Mr MacKenzie visited several companies, many of whom already have Scottish connections. Firms he met included Redfern Foods, Coats and Clark Inc (the US subsidiary of Coats and Patons Ltd, of Paisley), the WKM Valve Division of ACF Industries, the Marathon Manufacturing Co, Brown and Root, Halliburton, and Garden-Denver, Denver.

Nedo/ECGD seminar discussions published

A report [1] on the two seminars held by the Export Credits Guarantee Department and the National Economic Development Office has just been published.

At the seminars, held this summer, industrialists discussed their problems directly with ECGD in the presence of senior clearing bankers.

The report is a record of these proceedings and Nedo has published it to encourage direct consultations between manufacturing industry and those who provide financial services to assist the market penetration which is one of the objectives of the government's industrial strategy.

[1] 'Exports: credit insurance and finance' available from Nedo Books, 1 Steel House, 11 Tothill Street, London SW1 9LJ price £2.00 (£2.20 post paid).

Exporting data-processing equipment to Europe

A report on the requirements for data-processing equipment in several European countries has been published by Technical Help to Exporters (THE), the export advisory service of the British Standards Institution. Entitled 'Data processing and allied equipment', the report is the result of a detailed survey carried out by THE.

Technical requirements

The report identifies the technical and approval requirements for most types of data-processing equipment in Belgium, Denmark, France, the Federal Republic of Germany, Italy and the Netherlands. It identifies the various standards applicable to the equipment, and brief details are included of national attitudes which may affect the need for the completed equipment to be submitted for formal approval.

The report costs £150 to THE members, £200 to non-members, and is available from the THE Sales Office, British Standards Institution, Maylands Avenue, Hemel Hempstead, Herts tel. 0442 3111.

'Sink or swim' première

At the première of the BOTB/Emitel joint production 'Sink or swim' film for Export Year, the Duke of Kent and Jack Jones, patrons of Export Year, and Roy Kinnear (right), star of the film.

Dell meets Argentine minister . . .

Dr Jose Martinez de Hoz, Argentine Minister of Economy (right), with Edmund Dell, Secretary of State for Trade, in London on 14 September. During his visit to the UK (13-19 September) the minister opened the first European branch of the Banco de la Nacion Argentina and addressed a conference on Argentina organised by the Confederation of British Industry.

. . . and Korean Minister of Commerce

Minister of Commerce and Industry in the Republic of Korea, Mr Yie Joon Chang, with the Secretary of State for Trade, Edmund Dell. Minister Chang visited the UK as a guest of the government from 14-16 September.

Notices to importers

Issued by the Department of Trade, Import Licensing Branch, Charles House 375 Kensington High Street, London W14 8QH. Telephone inquiries should be addressed to the number at the end of the notice.

1635: Basic quota for imports of bananas from the dollar area

The basic quota for imports of fresh bananas, originating in the dollar area during the 12 months from 1 October 1977 to 30 September 1978 is to be increased to 6000 tonnes, and will be issued in three stages: 2000 tonnes on 1 October 1977, 2000 tonnes on 1 February 1978 and 2000 tonnes on 1 June 1978.

Applications from current licence-holders for allocations from the basic quota must be accompanied by a statement, in the form shown below, of imports in the period 1 October 1976 to 30 September 1977 of fresh bananas originating in the dollar area. Applicants who qualify will be informed of the amount of the allocation that will be reserved for them.

No guarantee can be given that it will be possible to meet requirements in full or that importers can be granted the same allocation as they have received previously. Applicants are advised not to enter into firm commitments before they have received notification of their allocations.

Import licences will be issued to importers against their allocations on production of evidence of a firm contract with the overseas supplier for the amount of the licence.

Applications on form ILB/A (obtainable from Import Licensing Branch, Charles House, 375 Kensington High Street, London W14 8QH) accompanied by the statement of imports referred to should be sent to reach Ministry of Agriculture, Fisheries and Food, Tropical Foods Division, 29 Bressenden Place, London SW1E 5DD, not later than 7 October 1977. Page 1 of the form should be completed; on page 2 only the amount applied for, in tonnes, need be stated; on page 3 and copy, the applicant's name and address, description of goods (fresh bananas) and tariff heading ex 08.01 should be entered.

Dollar area

The open general import licence defines the dollar area as Bolivia, Canada, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Republic of Honduras, Liberia, Mexico, Nicaragua, Panama, Philippines, United States of America and Venezuela.

Notice to importers 1446 about imports of plantains from the dollar area still applies.

Inquiries: Ministry of Agriculture, Fisheries and Food, tel. 01-828 4366 ext. 1163 or 1355.

Form of statement required

I/We declare that the quantities of fresh bananas originating in dollar area countries whether or not consigned direct from the country of origin which were cleared through United Kingdom Customs by me/us acting on my/our behalf or by a clearing agent on my/our behalf were as stated below:
1 October 1976 to 30 September 1977

..... (tonnes) Signed .....

Date ..... Status.....
(Owner, partner, company director or secretary)

1636: Imports of bananas from the dollar area

To offset expected shortfalls in supplies of fresh bananas to the UK from other sources, a supplementary quota of 8000 tonnes has been established for imports from the dollar area.

In order to ensure continuity of imports, the Department of Trade's Import Licensing Branch will allocate the supplementary quota among existing licence holders, having regard to the use they made of their allocations under the quotas for 1976-77.

Import licences will be issued to importers against their allocations only for those amounts for which they can produce evidence of a firm contract with the overseas supplier.

Licences issued under these arrangements will not be valid after 31 December 1977.

The dollar area as defined in the open general import licence means Bolivia, Canada, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Republic of Honduras, Liberia, Mexico, Nicaragua, Panama, the Philippines, the United States of America and Venezuela.

Inquiries: Import Licensing Branch, tel. 01-603 4644 ext. 237.

Industrial publicity

Publicity for British exporters can often be obtained through use of the facilities of the Central Office of Information, which is concerned with collecting from industry items suitable for dissemination overseas by way of government information services. The COI is interested in news items, feature article material, photographs, tape recordings for radio, and films for television and other screening. Contact should be made with the nearest regional office covering your area.

Northern: Mr H. G. Roberts, Andrews House, Gallowgate, Newcastle upon Tyne NE1 4TB (Tel: 27575 – Telex 53277 NTYNE).

Yorkshire & Humberside: Mr T. Cooban, City House, New Station Street, Leeds LS1 4JG (Tel: 38232 – Telex 55472 COI DOE – G).

East Midland: Mr A. Waller, Severns House, 20 Middle Pavement, Nottingham NG1 7DW (Tel: 0602 56181 – Telex 37572 COINOT – G)

Eastern: Mr A. A. McLoughlin, 72-80 Hills Road, Cambridge CB2 1LL (Tel: 58911 – Telex 81187 COICAM – G).

London & South Eastern*: Mr A. J. Goodson, St Christopher House Annexe, Sumner Street, London, SE1 (Tel: 01-928 2371 – Telex 918881 COI FORLANG LDN, message to be prefixed for London Region).

Southern: Mr A. S. Poole, Market Place House, Reading RG1 2EH (Tel: 580463 – Telex 848216 CENTROFORM RDG).

South Western: Mr P. D. Yorke, The Pithay, Bristol BS1 2NF (Tel: 291071 – Telex 44203 COIBSL – G).

West Midland: Mr D. C. Boyd, Five Ways House, Islington Row, Middle Way, Birmingham B15 1SH (Tel: 021-643 8191 – Telex 337576 COIBHAM).

North Western: Mr P. B. Porter, 22nd floor, Sunley Building, Piccadilly Plaza, Manchester M1 4BD (Tel: 061-832 9111 – Telex 667830 CENTROFORM MCHR).

Scottish Office: Mr C. MacGregor, MBE, Scottish Information Office, New St. Andrew's House, St James Centre, Edinburgh EH1 3TD (Tel: 031-556 8400).

Ulster Office: Northern Ireland Information Service, Stormont Castle, Belfast BT4 3ST (Tel: 63011).

Welsh Office: Mr Brian Evans, Director, Welsh Office Information Division, Oxford House, Hills Street, Cardiff CF1 2XG (Tel: 44171 – Telex 49327).

* National companies in central London, and particularly those with UK subsidiaries or branches, which require overseas publicity should consult Industrial Section at COI Headquarters: Mr E. Turnbull, Central Office of Information, Hercules Road, London SE1 7DU (Tel: 01-928 2345 ext. 271 – Telex 915444).

British designers break records overseas

Last year British designers – consulting engineers, architects and surveyors – earned more than ever in overseas currency for this country[1]. Their record-breaking year is examined in three reports from their professional organisations.

Consulting engineers

At the start of this year UK members of the Association of Consulting Engineers were responsible for overseas projects worth some £21,000 million – a record figure. Examples of the many projects currently going ahead are described in this article by the Association of Consulting Engineers. Further details are set out in the association's annual brochure 'Overseas work entrusted to members during 1976'.

In Qatar, the Umm Said port is intended to serve the needs of the planned industrial development in the area. Approximately 25 million m³ of dredging is being carried out to provide approach channels and manoeuvring areas but primarily for the reclamation of an area of approximately 675 ha for the development.

Existing facilities include a fertiliser plant and a flour mill with grain storage silos. A jetty has already been constructed for the export of the fertiliser plant products and for the import of wheat for the flour mill. A steel works and a petrochemical plant are under construction and will progressively start production from mid-1978. Initially two wharves are being constructed for the import of iron ore and three wharves for the export of steel products. A 1000 tons per hour ore unloader and rail-mounted wharf cranes are being provided. Two wharves are being constructed for the petrochemical plant. An ethylene loading arm and cranes will be installed on the wharves for the export of liquid ethylene, polyethylene and sulphur in bulk.

Bulk carriers of 125 000 tons dead weight will berth at the iron ore petrochemical plant berths and by mid-1978 approximately 2500 m of wharfage will have been constructed. The full development will comprise a continuous line of wharves about 4500 m long, broken only by the entrance to the small craft harbour.

The planning, design and supervision of construction of the marine facilities are being performed by Sir Alexander Gibb and Partners, who are also concerned with the civil engineering for the second stage extension of the fertiliser plant.

Then there is the expansion and modernisation of the port of Sibu, the second largest city in Sarawak, situated on the Rajang River and 88 km from the sea. The works, which are in the hands of Sir Bruce White, Wolfe Barry and Partners, comprise the construction of 305 m of marginal wharf, with a depth alongside of 9 m at lowest low water. The wharf is supported on hollow octagonal precast prestressed piles. The wharf deck is constructed of precast, prestressed soffit units placed in position which enable the remainder of the reinforced concrete deck slab to be cast in-situ. Fender piles are of belian, an extremely hard and durable Borneo timber, connected by walings compressing rubber buffers. Two transit sheds are provided on the wharf and buildings in the port area include a workshop, a canteen, a dangerous goods store, customs examination and other offices. Piped and electrical services are provided.

Vessels turn in the river which has a maxi-

[1] An annual article on the overseas activities of British construction contractors during the latest full financial year, contributed by the Department of the Environment, will be published in *Trade and Industry* later this year.

The jetty at Umm Said, Qatar. Consulting engineers are Sir Alexander Gibb and Partners.

A model of 'The Souk' at Sharjah in the United Arab Emirates. Consulting engineers are White, Young and Partners.

mum depth of 21 m and is about 760 m wide at the wharf site. The right bank of the river, where the port and city of Sibu are situated, suffers severe erosion which was the subject of a separate study by the consulting engineers. The contract for the port expansion works included rock anti-erosion blankets to protect the underwater slopes beneath the new and existing wharves.

The value of the works is approximately £5.5 million. The project is typical of the smaller port developments traditionally entrusted to British consulting engineers in the developing countries, where responsibility is undertaken from feasibility study to completion of construction, from the first surveys of the site to the provision of cargo handling plant on the wharf.

Sir Bruce White, Wolfe Barry and Partners were one of the member firms who gained a Queens award 1977 for achievement in export.

Breaking Atlantic storms

In Portugal, the new port of Sines is being constructed to provide deep-water berths, a new oil terminal and to stimulate the growth of a massive industrial complex. Bertlin and Partners, in association with two Lisbon firms, have been responsible for the design of the port including the detailed design of the breakwaters and oil berths. The first phase of the works will cost about £40 million.

The breakwaters at Sines are among the deepest in the world and are exposed to the full impact of Atlantic storms. Sheltered berths will be provided for product tankers, bulk carriers, general cargo vessels and for tankers of 1 million tons dead weight maximum capacity.

Bertlin and Partners have also been engaged to design new port structures for Dar-es-Salaam and Mombasa. The Dar-es-Salaam study has wide terms of reference. As well as the usual economic planning and feasibility work for a study of this nature there were additionally hydraulic studies, including model analysis, to determine the effects of the proposals in maintenance dredging besides fish and wild life resources.

Saudi Arabia: hospitals, roads, shops, hotels

A considerable part of consulting engineers' overseas work is concentrated in the Middle East where their different skills are being deployed in great variety. For the Saudi Arabian Ministry of Health, Wallace Evans and Partners of south Glamorgan have been working since 1972, engaged upon eight different types of hospital and a health training institute – all as part of the national health building programme. The hospital designs, based on modern principles, were adapted to the social and economic needs of Saudi Arabia and subsequently the same firm provided designs for three types of medical warehouses – to supply the hospitals. They have also contracted to provide technical assistance and advice to the Ministry on the long term construction plans of their hospital building programme.

BMMK and Partners have been active in Saudi Arabia for some 10 years. One of their projects now under construction, the Riyadh-Zalim Road, some 495 km long, was surveyed and designed in 1967-68 as a joint-venture project with Howard Humphreys and Sons. The intervention of the Israeli-Arab war delayed construction until October 1972 when BMMK and Partners (Consulting Engineers) Ltd was appointed to supervise construction, the road being divided into four approximately equal sections.

The first contract at the eastern end, from Al Muzahamiyah to Al Quwayiyah (section four), after a crash redesign for a difficult alternative route decided by community interests, was let in October 1973 to a Saudi firm of contractors, Saleh and Abdul Aziz Abahsain Co. This section traverses the most difficult territory of the route, containing three sections of barchan sand dunes, the most extensive being the Nafud Qunafidyah between Ghat Ghat and Bi'ar Tabrak having a width of nearly 40 km. This created some interesting design problems particularly with regard to the stabilisation of 'live' dunes adjoining the carriageway, work on which is still in progress.

The second contract from Al Quwayiyah to Halaban (section three) was let in January 1975, also to Abahsain Co. The third, at the western (Zalim) end being awarded in February 1976 to Gesteb, a Swiss contracting consortium. The fourth contract (section two) of the road is expected to go to tender in the autumn of this year.

Shopping at 'The Souk'

Presently under construction and due for completion in early 1978 is an extensive new shopping centre in Sharjah, one of the United Arab Emirates.

Known as 'The Souk', it is a building of classical Arabic design for Sheikh Sultan Bin Mohammed Al-Qasimi, ruler of Sharjah, and is regarded as one of the major buildings in the area. The consultants are White, Young and Partners of Sharjah and London.

Being built alongside Khalid Lagoon, the structure (eight linked buildings), will contain over 600 shop units and will follow a design adhering to traditional Arabic architecture with Moslem decorations in mosaic, marble, terrazzo, and specially designed tiling. The large vaulted malls are to be ventilated and cooled using convection generated by traditional wind towers, which are a specific feature of the lower Gulf. The new Corniche Road will run through the centre of the complex with decorated footbridges linking the two sides, and each bridge link will contain a certain number of shop units. The total value of the entire project is about £12 million.

An interesting engineering feature is that a large part of the site is reclaimed land deposited by dredging the lagoon and hydraulically filling the site.

Also in Sharjah, Brown Crozier and Wyatt are engaged on the new Holiday Inn Hotel; they are responsible for the architectural and engineering design work and supervision. The hotel has 270 bedrooms, a banqueting suite, restaurants, swimming pool and ancillary facilities. One of the tallest buildings in Sharjah, it will be opening shortly to provide much needed accommodation for the growing number of businessmen visiting the Emirate. An interesting feature of the interior design is the mahogany panelling lining the roof-top conference room which came originally from one of the famous Nash terrace houses near Regents Park in London.

Nigeria – my goodness

In Benin City, Nigeria, where Guinness Overseas Ltd is building a new stout brewery, Brown Crozier and Wyatt are responsible for the mechanical design of the brewing process plant and piping systems, with centralised steam boiler, compressed air, refrigeration and water treatment plants. An interesting extension of their work was to organise procurement and inspection of sophisticated and, in some cases, very large brewing vessels and plant, and to plan shipping, unloading and erection on site.

Chemical engineering in Seveso

Chemical engineering is one of the rather rare specialisations of the association's members but its importance was emphasised when,

after the tragic disaster by environmental contamination in the Seveso area, Cremer and Warner were immediately commissioned for remedial work. The tragedy occurred through an accidental discharge of a toxic cloud from a chemical works.

Their brief was, not only to help contain the toxic contamination but to study the whole situation and to provide a programme for the prevention of further Seveso-type accidents in Italy.

The same firm currently has an assignment at Talkha in Egypt for a large fertiliser project in the Nile delta while in Kuwait, Cremer and Warner has carried out a comprehensive environmental survey for the Shuaiba area authority which includes fertilisers (ammonia, urea, sulphuric acid and ammonium sulphate) two large refineries, a power station and desalination units. Their recommendations were made for the containment and control of pollution affecting the air, fresh water and marine environments.

Schools in Trinidad and Tobago

Back in 1968 the government of Trinidad and Tobago initiated a remarkable programme for new schools to cater for 40 000 children. Campbell, Reith and Partners were entrusted with the work which will be finally completed this year. The project consists of 22 junior secondary, and senior comprehensive schools, and a teachers' training college.The budget was low and the design team chose to use local construction methods, but in a highly organised and repetitive way, by purchasing standardised components and bulk materials in advance, stored by the seven contracting firms commissioned for the work.

Subsoil conditions were variable due to the complex geology of Trinidad and the difficulties encountered included slope stability, expanding clays, very high water-table levels, poor bearing capacity and toxic conditions. The design of the buildings was carefully conceived to take account of orientation, the prevailing wind conditions, the sun and the shielding necessary in such an environment. The building structures are designed to resist the damaging effects of seismic activity, apart from normal design requirements.

Pahang river bridges

Two new bridges are being constructed over the Pahang River in west Malaysia. The first, at Kuala Lepar, will carry the proposed Kuantan-Segamat highway across the river 50 km from the coast on a bridge 696 m long. The second, at Jerantut, will replace an existing ferry by a structure 464 m long.

Each bridge consists of a number of 116 m long balanced cantilever units of in-situ concrete which is post-tensioned as erection proceeds. Foundations are formed from groups of 600 mm and 900 mm cast-in-situ reinforced concrete piles up to 30 m long.

The design provides for a 12 km carriageway flanked by 750 mm sidewalks. Severe flooding is possible and the river can rise by up to 20 m at Jerantut. The combination of river bed scour during flooding and the likelihood of log jams of river debris forming around the piers governed the design of the piers. Approach roads are to be kept above flood level to ensure continued access in emergency conditions.

Construction work commenced with piling on land followed by cofferdam work and piling in the river. This was rapidly followed by pier construction. Superstructure erection was achieved by using travelling 'chariots' which supported all formwork and wet concrete for a 3.6 m-long segment. On completion of each balanced pair of segments they were stressed to the existing structure. Finally, all balanced cantilevers were connected with in-situ concrete and stressed together. The bridges were designed by Mott, Hay and Anderson International. Work commenced in October 1974 and will be completed early in 1978.

Electrical interconnection in Latin America

Kennedy and Donkin, who have recently received the Queen's award for export achievement in recognition of the worldwide growth of their business, are very active in Latin America, where they were selected to carry out a feasibility study of an electrical interconnection between Nicaragua and Costa Rica.

In the wet season, suitable conditions would seem to exist to enable Nicaragua to benefit from the importation of surplus hydro energy from Costa Rica. The study itself was required to analyse and quantify the benefits in the context of the forecast developments in power and energy demand.

Three possible approaches to interconnection were used for the technical and economic assessment of the project. They were: first, the transfer of 'secondary' (surplus) energy from one country to the other, second, the pooling of reserve capacity between the two countries, so that hydro energy shortages in dry years and the loss of supply due to faults in one country could be overcome by energy transfers from the other country; and third, the integration of both planning and operation for the two electrical systems.

The first could show a saving in running costs; the second and third, in addition, a saving in the capital cost of new plant required to meet the growth in demand, although obviously more difficult to implement from practical considerations.

The study showed a definite economic advantage for the construction of a 230-kV interconnector for the transfer of secondary energy.

Architects

Work being done by British architects in overseas countries continues to increase in volume and value although this has only been achieved by the exercise of much time and patience in highly competitive markets. This survey by the Royal Institute of British Architects describes the activities of a few practices working or competing, often with unfamiliar titles, in foreign countries.

While most attention is focused on the new ground being won in the Middle East, British architects are winning contracts throughout the world.

Abbey and Hanson Rowe (also as Associ-

River bridge at Pahang in west Malaysia. Consulting engineers are Mott, Hay and Anderson.

ated Design Consultants) have in the past year become involved in five new building projects or feasibility studies for government or private clients in Saudi Arabia and two in Doha, while a significant new commission has been the development programme of schools for the Municipality of Rome with Studio Nervi.

Ardin and Brookes have a hotel and cinema under construction in Ras Al Khaimah in the United Arab Emirates, and the hotel is due to be completed in May 1978.

Arup Associates has completed a 22 000 m² office and computer centre for IBM in the centre of Johannesburg in association with a local practice.

Michael Brawne and Associates have designed and are building the National Library of Sri Lanka in Colombo. The building will also have a number of associated agencies and institutes and will include lecture theatres.

Brewer Smith and Brewer Maxwell, part of a group with offices and work in Europe and the Middle East, provides specialised consultancy in planning and designing health and hospital services. They have been appointed for three projects in Canada, two in Winnipeg, the third in Medicine Hat. In all cases they are working with local professionals.

Building Design Partnership is building the Tehran bus station intended to serve all the major cities of Iran and long-distance services to Turkey and European countries. A capacity of 50 000 passengers and 850 bus movements per day is visualised. The practice has also designed a major bank in Lisbon.

James Cubitt and Partners have continued their work on the two Libyan universities in Benghazi and Tripoli. Phase one of Benghazi has been well publicised in Italian as well as British magazines.

Clifford Culpin and Partners have now embarked on a new contract and are leading a team of international and local consultants in the implementation of parts of their original master plan.

Cusdin Burden and Howitt designed the faculty of medicine for the University of Riyadh which is now under construction and proposals have been called for the extension of the capacity of the school and the teaching hospital.

Ian Fraser, John Roberts and Partners have a considerable amount of work overseas, the most significant being the International Hotel in Riyadh. On top of much existing work in the Gulf area John R. Harris is now commissioned to build the new Dubai Hospital which was the subject of an international competition in April last year.

W. S. Hattrell and Partners have been active in Paris in the conservation field adopting, extending and rehabilitating buildings and in work for Marks and Spencer involving both shops and a warehouse.

Hubbard Ford has been responsible for building shops and flats in Sharjah and Ajman in the United Arab Emirates.

Llewelyn-Davies Weeks Forestier-Walker and Bor have done work in the Middle East, West Indies and the Philippines. In Iran they have submitted the master plan for Tehran, a new city centre at Shahertan Pahlavi and the implementation of the various stages is being worked out. Under construction are a 630-bed hospital in Dohaunde and a 550-bed medical centre in Bahrain. Tender documentation is complete for the extension to the public services hospital in Riyadh. In Oman the practice is helping to establish a directorate of planning and is preparing a strategic plan for the capital area. A pilot project for the World Bank in the Philippines involves the preparation of a comprehensive study for the development of self-sustaining resettlement of thousands of slum dwellers. In the Caribbean development plans have been prepared for an additional medical school and teaching hospital in Trinidad as part of the University of the West Indies.

The Owen Luder Partnership is working on a new headquarters for the West African Health Secretariat in Lagos, in conjunction with Femi Akande, as well as a new outpatients department for the state hospital in Ondo State. A number of tourist centres have been designed for Ikogosi in Ondo State and at Asejire in Oyo State.

Michael Lyell Associates appointed by Associated Continental Architects (led by White, Young and Partners) are carrying out work on 'The Souk' in Sharjah (described on page 553), the Al-Ghurai Centre in Dubai, the new Gulf Hotel in Bahrain and the Cairo Plaza.

The government of Saudi Arabia's summer headquarters at Taif by Sir Leslie Martin is being occupied by the first 18 ministries and further accommodation will be ready within a year.

Robert Matthew Johnson Marshall and Partners have started an 11-month programme of work for the implementation of the development plan they prepared for the City of Suez.

The Ministry of Pilgrimage and Endowment of Saudi Arabia has engaged RMJM and Partners to design four eight-floor apartment buildings offering a combination of one-, two- and three-bedroom apartments, shop premises and facilities for medical surgeries in the central area of the holy city of Medina. This starts the implementation of the master plan for the area which was one of the six completed for the holy cities of Mecca and Medina.

In Libya there are three projects; an industrialised building project at Gurgi intended to reduce the national housing shortage and to contribute to the formulation of the new Libyan environmental character; two tourist villages are near Tripoli, the other outside Benghazi. The practice has been working in Nigeria since 1962 and has two major educational projects, the first for secondary schools and primary teacher training colleges in the former eastern region, the second connected with the new universities programme working with five Nigerian firms to set design and procedure standards.

Pick-Everard Keay and Gimson have made modest beginnings in the Gulf with a diesel power station and sub-stations at Ajman, Sharjah and Fujairah. Rothermel and Cooke now have a contract for the construction of the Abu Dhabi Hotel, a commission won in the international competition in 1976. W. H. Saunders continue their work in Europe with office/shopping schemes in Munich which has now reached the fitting out stage; other commercial commissions involve work in Hamburg, Stuttgart, Hanover and Dusseldorf, and the preliminary designs for the second stage of the work completed in The Hague. In the industrial sector work has been done in Frankfurt with a follow-up phase planned. Feasibility studies are being undertaken in Spain and Portugal. Raglan Squire and Partners continue their hotel work in the Gulf, Indonesia and Panama.

The Percy Thomas Partnership has work in the Gulf, at the El Ain Minor Hospital at Abu Dhabi, and has submitted a scheme in a limited international competition for a state mosque in Kuwait. In Egypt the practice produced the winning entry in the international competition for a 600-bed specialist referral hospital in Cairo. Triad have just completed the senior staff club in Doha for the government of Qatar to provide sporting and recreational facilities for senior government staff and their families.

Yakeley Associates, working as MacDonald Yakeley Joint Venture, is developing a large water treatment plant and power station with a complete village in the middle of the desert at Wasia, east of Riyadh.

continued on page 556

Senior staff club at Doha in Qatar. The architects for the projects are Triad.

Surveyors

Overseas activities of members of the Royal Institution of Chartered Surveyors have undergone a significant expansion in the past 12 months, as the institution now reports. Over 4000 chartered surveyors are now operating in some 70 overseas countries, either in the public sector or in private practice working for public and private clients; and many more are providing services from UK offices for foreign clients.

Good prospects for the profession continue to come from the Middle East. In November-December last year the president and secretary-general of RICS visited seven countries in the region to assess further opportunities for providing professional surveying services and to promote the use of British surveying skills. During their tour the president and secretary-general met 160 chartered surveyors already working in the seven countries and had meetings with representatives of British embassies, national and municipal governments and others engaged in banking, commerce and the construction industry.

Reports published

In response to requests from governments and other potential clients for further information about the services provided by chartered surveyors, RICS has since published two reports. The first of these describes the full range of services which members of the profession can provide for overseas clients and illustrates these by reference to a variety of projects throughout the world on which chartered surveyors have been employed. The second explains in more detail the scope of the quantity surveying profession and the relevance of its skills to the planning and programming of construction projects.

As a result of meetings attended by the president and secretary-general in Egypt with the governor of Cairo RICS has prepared, at the governor's request, a preliminary report on the administration of properties owned by the City of Cairo. In Kuwait the president and secretary-general were specifically asked if RICS could assist with the provision, in the UK, of intensive training in real estate management and development for senior employees of Kuwaiti development companies and this request is also being followed up by the institution.

Senior government and other officials met by the president and secretary-general in Iran expressed considerable interest in the part which surveyors skilled in construction economics and land administration could play in Iran's development and how the profession in the UK could contribute to the establishment of an indigenous surveying profession in Iran. The Oil Services Company of Iran already utilises the services of British quantity surveyors and a chartered quantity surveyor is now advising the company on the education and training of indigenous personnel at professional and technician levels.

The overseas activities of the profession continue to concentrate on the three distinct fields of surveying and mapping, land administration and construction economics. Over 90 per cent of chartered land surveyors work outside the UK, undertaking programmes of mapping that are the essential preliminary to all forms of development. Their services are increasingly required in connection with the exploitation of offshore oil and gas reserves and, in the North Sea, British survey companies are undertaking much of the position fixing and data collection work needed for laying under-sea pipelines, as well as carrying out 'as-built' surveys. Offshore surveys are also a pre-requisite to harbour development and the demand for marine consultancy services in the Middle East has led another British company to establish an office in Bahrain from which it is undertaking work throughout the Gulf, including hydrographic surveys of the approach channel and port area required for the construction of Saudi Arabia's new deep-water port at Jubail.

Mapping and surveying

Important commisions awarded to British companies for surveying and mapping land areas in the Middle East include a £600,000 contract to carry out geodetic surveys and photogrammetric mapping of the State of Bahrain and a £150,000 contract for aerial photography and mapping of the western coast of the United Arab Emirates.

Surveys commissioned from British companies by foreign governments anxious to develop their countries' natural resources include an aerial survey of Crete and large parts of Greece to assist the Greek government in planning mineral and oil exploration programmes; airborne and ground surveys of 165,000 km² of southern Morocco; and a contract valued at £370,000 for a mineral survey covering more than 30 000 km² of the Juba region of Sudan.

In Nigeria a dozen British survey companies are now providing consultancy services on a wide range of projects. One company was recently awarded a contract valued at 1 million naira (approximately £875,000) to carry out water-borne surveying services in the oil-producing Niger delta and other important contracts include an airborne survey of the whole of Nigeria using side-looking radar and the provision of an interpretation for FAO of Landsat imagery of the Nigerian countryside. Landsat imagery is also being used in a programme of land-resource mapping which British surveyors are undertaking in Afghanistan, in connection with the preparation of a master plan for the Konar Basin.

Land administration

In the field of land administration, services provided by the profession range from preparing national development plans to advising on the development and management of single properties. Chartered surveyors directed and co-ordinated the preparation of the regional plan for the Suez Canal zone, an 18-month study which represented the culmination of the United Nations' largest-ever development planning project within a single country. In Athens, where the World Health Organisation is carrying out a project on environmental pollution control, including studies on the role of urban and regional planning, a chartered surveyor was invited by WHO to assess the master plan for the metropolitan area and the planning process in relation to pollution control. In Guatemala a chartered surveyor headed the team which formulated proposals for the country's redevelopment following its devastation by earthquake in February 1976.

New town development

As members of the team which prepared the master plan for the re-development of part of Tripoli, chartered surveyors assessed the demand for commercial uses in the area and the likely financial performance of a range of development options and subsequently advised on ways and means of implementing the proposals. The profession also has a role to play in costing development plans: chartered quantity surveyors have already provided analytical cost studies and cost estimates for Kuwait's urban development plan, the total value of which is estimated at £20 billion, and were recently retained to carry out similar exercises for the new town of Jubail in Saudi Arabia.

The profession continues to play a major role in the development of Lilongwe as the new capital city of Malawi. The general manager of the Capital City Development Corporation, which has overall responsibility for the project, is a chartered surveyor; other members of the profession hold senior positions in CCDC's estates department; and full quantity surveying services are provided on many of the contracts placed by the corporation for the development of the new city.

In Nigeria, chartered surveyors have been retained as development project managers for the new town of Agbara which will eventually extend over 810 ha and have an estimated population of 100 000. The total development cost of the first phase of the new town, for which detailed planning permission has already been obtained, is estimated at £58 million. Other examples of development project management services provided by chartered surveyors include a major shopping centre in Australia, a yacht club in the British Virgin Islands and a prestige office block in Cairo.

Property development advice

Opportunities for chartered surveyors to advise on various aspects of urban property development and management in the Middle East have increased during the past 12 months and British firms have now established local offices in several countries, including Egypt, Bahrain and the United Arab Emirates. They are retained by local developers to monitor the existing and potential supply and demand for commercial, hotel and residential accommodation; to evaluate alternative development proposals; to advise on all stages of the development process; to effect the sale or lease of the property on completion; and, where the property is let, to manage and maintain it on behalf of the owner. Chartered surveyors, because of their knowledge of the land market and the relationship between capital investment and revenue yield, are also evaluating, negotiating and securing investments in land and property for Middle East

A model of the Bernadine development at Piran, Yugoslavia, for which chartered quantity surveyors acted as project managers.

clients on a worldwide scale. A firm of chartered surveyors was retained by a Middle East government ministry to advise on the purchase of a prestige office block in Paris: in conjunction with the client and their legal advisers, the firm also assisted in the financial negotiation of the purchase and was subsequently retained as sole letting agent.

Similar services continue to be provided for British and European clients investing in the overseas property market. British firms operating in Europe have secured, developed, sold and let numerous sites and buildings during the past 12 months and British activity in the United States has expanded considerably over the period. As well as advising British and foreign clients on investments in the American property market, specific assignments recently received by American offices of British firms include instructions to evaluate a real estate portfolio of over $40 million, located mainly in Florida, and to provide advice to a Middle East client on a $100 million commercial complex in Atlanta.

Middle East expansion

The extent to which chartered quantity surveyors have expanded their activities in the Middle East and north Africa is well illustrated by the fact that the number of firms working in Saudi Arabia has doubled in the past year and three times as many are active in Libya compared with the position 12 months ago. Normal quantity surveying services (cost planning, cost control and other post-contract services) are being supplied by British firms on a wide range of projects throughout the Middle East.

These include the Dubai Trade and Exhibition Centre (a £100 million contract); sports centres in Saudi Arabia, including Jeddah and Abu Dhabi; universities in Iraq, Kuwait and Saudi Arabia, including a new campus for the University of Kuwait for which the overall contract value is estimated at $400 million; the Abu Dhabi national library; aluminium smelter complexes in Bahrain and Dubai; Bahrain's £60 million deep-water port; an oil terminal in Abu Dhabi; civil engineering projects in Bahrain, Iraq, Kuwait and Oman; a printing works in Iraq; brick-works in Kuwait; shopping centres in Qatar and the United Arab Emirates; hospitals in Kuwait, Qatar, Saudi Arabia and the Emirates; hotels in Egypt, Iran, Iraq and the Emirates; a police headquarters in Oman; housing developments in Bahrain, Qatar, Saudi Arabia and the Emirates; parliamentary buildings for the governments of Kuwait and Saudi Arabia; and office and commercial developments in Kuwait, Qatar and the Emirates.

Projects in Europe

Chartered quantity surveyors have acted as as project managers for a 25 ha tourist development in Yugoslavia comprising three hotels and a marina and valued at £25 million. Normal quantity surveying services have been provided on a wide variety of construction projects in France, including the refurbishment of Les Grands Magasins du Louvre in the heart of Paris; West Germany; the Netherlands; Belgium; and Switzerland. They have also been utilised by the constructors of Portugal's third oil refinery which will have a nominal crude capacity of 10 million tons per annum when it comes on stream in 1978.

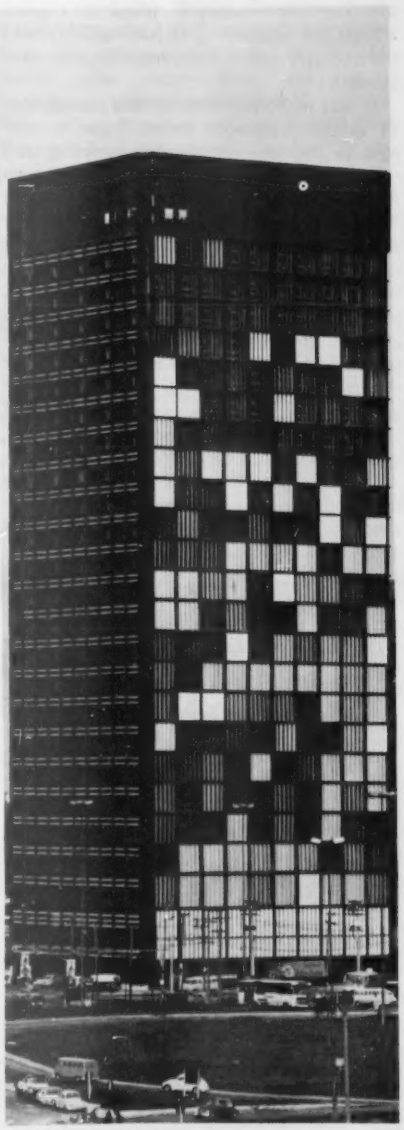
Projects in Africa

Quantity surveying services are being supplied on two new university complexes in Libya. In Nigeria quantity surveyors have been retained to provide cost advice in preparing master plans for the development of Kano and Maiduguri universities. Other projects on which quantity surveyors have been involved in that country include hospitals, hotels, government buildings and the new parade ground in the centre of Lagos. In Sudan, where an agricultural development covering some 300 000 ha is being undertaken chartered quantity surveyors examined and verified the initial cost estimates prepared by the World Bank for the construction of the four largest administrative centres and are now undertaking the financial administration of the contract.

Far East and the Americas

The demand for quantity surveying services remains high in the Far East and in Indonesia where they are being employed on the construction and assembly of steel well platforms required for the development of an offshore oil field. The profession continues to be involved in a number of construction projects in the Caribbean and during the last 12 months quantity surveyors have undertaken a number of assignments in the Americas. These include the provision of quality and financial monitoring services for a major office block in Brazil and the monitoring of costs and progress of a multi-use building in Chicago which is reputed to be the tallest framed reinforced concreted building in the world.

The Edifício des Nações in Sao Paulo, Brazil. Chartered quantity surveyors teamed up with Brazilian engineers on the project.



Overseas trade exhibitions

UK cleans up in Japan

From G. H. Fry, British embassy, Tokyo.
Because of the pollution problem in its big cities and industrial areas Japan has an unenviable reputation around the world. Yet it was only fairly recently that the Japanese themselves came to realise that their rapid industrial growth had seriously damaged their living environment and that they had been neglecting to their cost such basic services as sewage and refuse disposal. They have made much progress over the last decade, but the size of the problem is still immense. The Japanese Ministry of Construction for example plans to spend Y7,500,000 million (£16,300 million) over the next five years on sewerage improvement alone.

It was with their eyes on this market that 14 British companies visited Japan to take part in the environmental engineering and technology exhibition held at the British Export Marketing Centre from 6 to 10 September under the sponsorship of the Engineering Industries Association. At the end of a busy week they agreed that the timing had been just right. They were all impressed with the quality of the visitors and their interest in the exhibits. One company which had exhibited earlier in the year through their agents at the leading Japanese anti-pollution exhibition reported more new contacts and more serious interest in the specifically British event.

For all the companies, participation in the exhibition was just one step in the process of establishing themselves in Japan, and none expected to take orders on the spot. During the exhibition period, however, one company, Stablex, announced that agreement had been reached on the construction of the first two plants in Japan using their Sealosafe process for the processing of hazardous and toxic waste. (see page 548).

Stablex was one of the companies which took the opportunity to make a technical presentation at one of the series of seminars held during the exhibition. Advance registrations were so great that six out of the 10 seminars were over-subscribed and had to be repeated. The size and quality of audiences at the seminars contributed greatly to the exhibition's success, bringing in top-level technical personnel from leading companies and local authorities.

Although there was a variety of products on show including unit dust-collectors and pneumatic valves, the main emphasis was on water treatment and waste disposal/compaction equipment. Exhibitors agreed that there were major areas where Japanese methods or technology were well behind Britain's. The Japanese have already acquired much foreign know-how, Hawker-Siddeley Water Engineering, for example, has licensed to the Japanese company Mitsui Miike its waste-water treatment technology, and both sides agreed that the exhibition and seminars had been a good vehicle to launch this in Japan.

Colonel R. E. Scott, Exports Director of the Engineering Industries Association and leader of the British group, said, 'The problems of pollution are so large and so various that no one country can have all the answers. We must all learn from each other. The success of this exhibition has shown that there is considerable interest in Japan in advanced British technology in this field.'

Good business at Frankfurt

From Sue Holmes, British consulate-general, Frankfurt am Main
Fifty British firms took part successfully in five joint ventures sponsored jointly by trade associations and the British Overseas Trade Board, along with a further 18 firms exhibiting independently at the Frankfurt international fair from 26 to 31 August.

A total of 2700 exhibitors, including 681 companies from non-German countries, displayed on a net exhibition area of 87 300 m² a wide variety of consumer goods ranging from pottery, glassware, cutlery and silverware, metal goods, gifts and fancy goods, jewellery and smokers' requisites, stationery and office supplies, to lamps, occasional furniture and wickerware, shop fittings and window dressing supplies, toiletries and cosmetics.

Eighty per cent of all exhibitors – who had come to Frankfurt with cautious optimism – declared themselves well satisfied with the volume of orders placed by the 70 000 trade buyers, and British participants were no exception. While the majority of the visitors came from Germany and the neighbouring community countries, only small groups of overseas buyers – notably from the United States and Japan – were in evidence.

Without exception, British exhibitors in the joint ventures sponsored by the British Ceramic Manufacturers' Federation, the UK Cutlery and Silverware Manufacturers Association, the British Jewellery and Giftware Federation, the Design Council and the British Art Metal Manufacturers' Export Group – well-established regular participants in this event – welcomed the opportunity of renewing existing contacts with agents, distributors and customers from abroad, and many made valuable new contacts.

Although exhibitors do not expect any substantial orders at this event, which caters mainly for short-term and seasonal business, quite a large number of British participants were surprised by the good volume of orders booked, in particular in the gifts and fancy goods sector. For some British exhibitors it turned out to have been their best autumn event ever, and almost all participants were well satisfied with the results achieved.

The next Frankfurt international fair will take place from 26 February to 2 March 1978.

Leipzig: quiet but encouraging

From Derek Tonkin, British embassy, East Berlin.
A very high level of attendance from other Council for Mutual Economic Assistance countries was the main feature of the Leipzig autumn fair which took place from 4 to 11 September 1977.

'We have never had so many delegations from eastern Europe at this fair. The Poles are especially strongly represented', said a British exhibitor of shoe-making machinery.

This fair confirmed Leipzig's status as the premier meeting place for east-west trade. UK industry was again present in force with nearly 100 direct exhibitors and many more represented by their agents. John Steele, deputy secretary, Department of Trade, spent two days at the fair and had discussions with the GDR Minister of Foreign Trade and two deputy ministers and with the Minister for the Chemical Industry on ways of realising the expressed desire of both sides to more than double trade by 1980.

Ambassador Cradock gave a reception for top-rank GDR contacts concerned with UK trade, which was attended by a number of leading British industrialists. Michael Cochlin, head of BOTB's fairs and promotions branch, spent three days talking to British exhibitors and visiting various parts of the fairground.

The Leipzig autumn fair concentrates particularly on consumer goods and the chemical and automotive industries. It is primarily a fair for making contacts rather than for concluding new business. Seasoned exhibitors described the fair as relatively quiet, particularly in the chemical sector since the industry's attention was on the concurrent chemical fair in Moscow. The specialist printing industry exhibition in Düsseldorf in June meant that there was also little activity in this sector at Leipzig. In general, however, British exhibitors reported a high level of interest and an encouraging number of new inquiries. The main British exhibit was a joint venture display organised by the Society of Motor

John Steele, deputy secretary at the Department of Trade (centre), and UK ambassador in East Berlin, Mr P. Cradock (right) talking with Mr M. Sellers, director, East Europe Shell International Petroleum Co, on the Shell stand.

Manufacturers and Traders in which seven companies took part. The Deputy Minister of Foreign Trade, Dr Schwierz, visited the joint venture and held discussions with each of the exhibitors.

Although some important business was done at the fair, more awaits financial approval from the GDR authorities and the fair shed little light on the prospects for increased GDR imports under the 1978 plan. In the consumer goods sector, purchases for the hard-currency Intershops seem in total to have increased substantially over last year.

Lack of hard currency damps business prospects

From Neville Holland, British embassy, Sofia

For the eleventh successive year there was a British pavilion at the thirty-third Plovdiv international trade fair which took place from 3 to 10 September. The pavilion consisted of 18 stands which represented some 50 companies.

The day after opening the official pavilion was visited by Christo Christov, the Bulgarian Minister of Foreign Trade, who was obviously impressed by what he saw. The minister's interest was shared by the large number of Bulgarian purchasers, and exhibitors reported from the beginning a high level of serious inquiries. The principal British visitor to the fair was Lionel Lightman, under-secretary at the Department of Trade and co-chairman of the UK-Bulgarian joint commission.

Focal-point of the British exhibit was an impressive display of audio-visual equipment shown by Denis Tyler Ltd whose stand, drew not only large crowds but also prospective buyers. No less popular was the range of copying and printing equipment exhibited by the three companies Rank Xerox, Rotaprint and Monotype, the last named winning a gold medal.

Keen interest was also shown in the range of construction equipment – excavator/loaders, crawlers and loading shovels – exhibited by JCB Excavators and the Ferranti Agricultural Division front-linkage and front-power take-off for fitting to tractors. The range of cleaning equipment shown by Cimex Export Ltd and Steam Vacuum Extraction Ltd were once again proof of Bulgaria's interest in this field.

Given the high level of interest and the initial optimism of the exhibitors, there was a sense of disappointment among some of them when it became clear towards the end of the fair that their expected firm orders were not forthcoming, mainly due to a shortage of hard currency. It is probable that business conducted at the 1977 fair will be marginally less than last year. It should be stressed however that it is too early to be specific since a number of exhibitors plan to carry on their negotiations after the fair closed.

Bulgaria is a difficult market to enter and companies wishing to break into the market must be prepared to exercise patience. The Plovdiv fair presents exporters with the opportunity not only to establish useful contacts with the foreign trade organisations but also to meet prospective end-users of their products – the latter opportunity usually denied to them at other times.

Over 40 countries participated in this year's fair. In addition to the large displays mounted by the eastern European countries (business with the Soviet Union alone is reputed to have exceeded 2 billion leva), there were official exhibits by West Germany, Belgium, France, Denmark, Switzerland, Italy, Austria, Greece, Iran and United States as well as a number of developing countries.

Take-off for UK firms at airport show

From Dermot Flanagan, British embassy, Vienna

Seventeen British firms exhibited in a joint venture at the fourth international airport construction and equipment exhibition, which took place in Vienna from 7 to 10 September.

The British companies were sponsored by the London Chamber of Commerce and Industry and the British Overseas Trade Board. Altogether, 152 companies exhibited from 16 different countries. Besides the British joint venture there was also a Canadian government-supported group. Some other countries such as Sweden and Denmark had joint stands organised by the companies themselves.

The exhibition which takes place every two years, coincides with the annual congress of the International Civil Airports

Britain at Cologne's Anuga food fair

Edward Bishop, Minister of State, Ministry of Agriculture, Fisheries and Food, on the stand of Smedley HP Foods Ltd at this year's Anuga food fair held in Cologne from 10 to 15 September. The minister (left) is discussing the firm's exhibits with Michael Smedley, overseas development director. Britain was the third largest foreign entry with 95 firms exhibiting within a joint-venture group backed by the British Overseas Trade Board in conjunction with the British Food Export Council.

Association (ICAA). This year the ICAA congress attracted over 430 delegates, representing 250 airports throughout the world, and although there was some criticism that more could have been done to provide opportunities to meet the delegates nevertheless many useful contacts were made.

One of the principal aims of the exhibitors was to establish contacts but a number of serious inquiries led many companies to believe that firm orders will result. Leyland International, for example, displayed the full range of its various companies' products in the commercial vehicle field, anticipate business to the tune of £750,000 with worthwhile continuing business. Auriga Lighting Systems, were displaying for the first time at any exhibition their new 'Rite Lite' mobile lighting equipment and hope to do a similar amount of business. Other companies, such as Cable and Wireless, Weldwork Cargo Systems and Thorn Lighting were very satisfied with the response.

On the opening day, Sir Derek Ezra. chairman of BOTB's European trade committee and the British ambassador Mr H. Morgan visited the exhibitors on the joint venture.

Although attendance at the exhibition could have been better, there were some 3 000 visitors from 72 countries. Apart from the last day which was open to the public the fair was restricted to trade, and business visitors including airport authorities, directors and management executives from international and national airports, as well as airline operators, architects, consultants, finance directors, project managers, specialist engineers, security and safety officers, ground service, and cargo managers.

Despite the fact that this highly specialised fair was aimed at the ICAA delegates, it attracted a satisfactory number of visitors from Hungary, Yugoslavia and a number of Austrian airport authorities are known to have made serious inquiries.

The overall impression gained was that Airport 77 achieved its prime objective of showing the progress in the planning construction and maintenance of the complete airport complex, since it was last held in 1975.

High level of demand for UK giftware

From Richard Levy, British Trade Development Office, New York

'A great opportunity for British trade', said a representative of one of the 23 British companies exhibiting at the New York gift show held from 14 to 19 August and these summarise the view of the British exhibitors of this ninety-third bi-annual event held at the New York Coliseum and New York Sheraton Hotel.

Co-sponsored by the Westminster chamber of commerce and the British Overseas Trade Board, this was the eleventh successive joint venture. The event was well attended with nearly 30 000 trade visitors, mainly comprising storebuyers and other merchandisers, many wishing to order British giftware in time for the Christmas selling season.

Quality and craftsmanship

The merchandise on display comprised a wide and varied selection of giftware representative of UK quality and craftmanship. These included Cole and Mason's line of kitchen accessories, Legend Products' sculptured artware, and leather luggage, handbags, and travel accessories by Molmax Group Sales. Also displaying their wares were W. A. P. Watson Ltd with souvenir spoons and metal giftware, quality linens by Ulster Weaving Co, lampshades by Sublime Lighting Ltd, and adult games and executive gifts by the Henley Company of Craftsmen.

Decorative mirrors were popular, and among those displaying them were Cabinet Exports Ltd, Aspell Saggers and Co, Braddel Enterprises and Polygraphique Studios. Melbaware ceramic model horses and other animals were on display from W. A. Wain and Sons. Kandell Designs displayed decorative candles and Etrusca Ltd, onyx and alabaster clocks.

Among the many unusual products offered were Yorkshire mill bobbin dolls and skipping ropes by Discovery Antiques, woven pictures from J. and J. Cash Ltd, leather and melamine giftware from 14th Century Art Studios, PVC coated aprons from Vale Mill Ltd, and posters, jigsaws and fancy stationery from Printing Arts Ltd. Rounding out the British group were MBC Marketing, Guildcrafts-Poole, London Light with Kersh of London, and Cooper Pottery, each with its own distinctive line of quality giftware.

Most of the British exhibitors reported doing well at the show and there was a near unanimous wish to participate in it in the future. This prevailing level of optimism, together with the high level of demand for quality British merchandise, serves to underline the many opportunities that abound in this important market.

Strong UK showing at Khimya '77

Peter Cooke of Pye Unicam with visitors at the fourth international chemical exhibition, Khimya '77, which closed in Moscow on 15 September. Thirty-one companies exhibited with the backing of the British Overseas Trade Board. Products on display in a British pavilion included chemicals, veterinary pharmaceuticals, insecticides, cattle dips, materials-testing equipment, dyestuffs, ion exchangers laser spectrophotometers, heat exchangers, spectrometers, chromographs, labelling systems, petroleum products and project services for process plant.

British microwaves in Copenhagen

From Mogens Helle, British embassy, Copenhagen

Some 650 delegates were attracted to the seventh European microwave conference that was held at the Bella Centre in Copenhagen from 5 to 8 September. The delegates came mainly from Europe but also from countries as far away as Canada, India, United States and the Middle East.

Associated with the conference was an exhibition at which some 120 exhibitors from eight countries showed the latest equipment and components for the microwave industry. Almost two-thirds of the exhibitors were American and of the rest, the majority were from the UK, with only a handful of exhibitors from West Germany, France, Italy and Sweden. Amongst the UK firms exhibiting, 18 companies formed a British joint venture sponsored by the Electronics Engineering Association and the British Overseas Trade Board.

Although Denmark, with her almost negligible indigenous microwave industry, was perhaps not the best place for a conference and exhibition of this kind, most exhibitors at the British joint venture were content with the event and all had received a satisfactory number of serious inquiries. Notably AEI had received one inquiry worth £250,000 and Continental Microwave Ltd, Alroy Microwave and Electronics Ltd, Ferranti Ltd, Com-Rad Electronic Equipment Ltd, Flann Microwave Instruments Ltd, Plessey Co Ltd, Marconi Comm. Systems Ltd, and Nore Microwave Ltd all reported inquiries worth several thousands of pounds. In addition a number of exhibitors made contact with potential agents in various European countries.

A conference on such a highly-specialised and advanced subject attracts a large number of scientists who are often not themselves potential buyers of equipment and components. From the exhibitors' point of view it is therefore important that the event takes place in a country with a strong indigenous industry which can provide an outside clientele of potential buyers and decision makers.

In the case of Copenhagen it helped to have a relatively large number of visitors from Sweden; but it was still the general opinion of the exhibitors that the mix of visitors was too heavily dominated by academics, students and others who are not normally engaged in purchasing decisions.

Overseas trade export services

New ro-ro service to Sweden by P&O

P and O is introducing a new integrated ro-ro shipping and trailer haulage service between the UK and Sweden, to be operated by Ferrymasters, part of P and O Unit Loads. The new service will operate from Middlesbrough to Gothenburg and Helsingborg.

A twice-weekly sailing in each direction will be provided by the *Elk*, approximately 9200 dwt, which will operate from Middlesbrough's Tees Dock ro-ro terminal every Monday and Thursday. The Tees Dock roll-on terminal, with a 12-acre parking area and extensive covered storage, will be exclusive to Ferrymasters.

Elk is the first of six ro-ro freight vessels to be introduced by P and O over the next two years to support the progressive development of the group's growing network of integrated freight services.

As well as carrying Ferrymasters' own door-to-door traffic, the schedule, with a UK departure at 10.00 hrs on Mondays and Thursdays, is also designed to suit independent hauliers operating with their own vehicles on a quay-to-quay basis. Air-conditioned cabins, with private facilities, will be available for up to 12 drivers accompanying loads.

Elk will carry up to 120, 12 m trailers per sailing. The two-deck *Elk* has a fixed ramp to the upper deck to give a simple but speedy loading and discharge capability for semi-trailers. The main deck and stern ramp are strengthened to carry low-loader and abnormally heavy traffic. Large stern doors offer an opening of 11.6 m wide and a 6.2 m high for indivisible loads.

Further information: circle 771

BA and Hilton in US link-up

In an exclusive arrangement with British Airways, Hilton hotels and inns in the United States are offering a special service to the airline's business travellers.

From 5 September they can get reduced rate accommodation at any of the 170 Hilton hotels or inns, enjoy a quick check-in and check-out and speedy payment.

Hilton have divided all their hotels and inns into three categories for this programme based on the property and location. The rates being offered exclusively to British Airways' passengers offer a saving on certain room rates of between 20 and 27 per cent.

Executive programme

As an 'executive programme' guest at a Hilton hotel or inn, British Airways' business passengers, either through a travel agent or one of the airline's travel shops, can request their Hilton accommodation and have it confirmed, with the knowledge that it will be held no matter when they arrive on the day.

When the British Airways' passenger does arrive at the hotel or inn he or she will already be registered. The only formality will be identification and room key collection at the quick check-in or assistant manager's desk.

British Airways' passengers may stay in their room until 6 pm on day of departure provided the hotel or inn is notified before normal check-out time.

VIP checkout

If a passenger wishes to save time at checkout, a Hilton VIP check-out form can be obtained at any time during the stay. Completion of this form and any credit card of Access, American Express, Bank America, Barclaycard (Visa), Carte Blanche, Diners, Eurocard, Hilton or Master Charge submitted during the stay eliminates calling at the cashiers desk on departure.

Further information: circle 772

Foss extend feeder routes in ME

Fred. Olsen Seaspeed Svedel (Foss) has extended its ro-ro operations in the Middle East by introducing a new feeder service to call weekly at Kuwait and Bandar Shahpour. This new service is an extension of the consortium's activities in the Gulf and will operate from Dubai.

With Foss already serving Doha and Abu Dhabi with through bills of lading, the line now feeds to four ports in the area and it is expected that this number will be added to shortly.

Congestion

Foss says that there is still much loading and discharge congestion in this area but because of the limited port facilities demanded by ro-ro ships the introduction of the new service means customers can speed up their transport arrangements.

The Seaspeed ro-ro feeder vessels used by Foss are capable of carrying 22, 12 m trailers or, by double stacking, 94, 20 ft containers. As well as the obvious road vehicles and trailers – containers, flats and loose cargoes can be taken on ship-only trailers together with heavy loads up to 150 tonnes, on low loaders.

Further information: circle 773

Port Said now on Egypt route

Port Said is now included as a direct call in the Egypt run operated by Bahr, Behrend and Adriatic Container Services of Trieste.

The new service operates from Trieste every 18 days, and started on 6 September. Both 20 ft and 40 ft containers will be offered. This frequency coupled with significant improvements in the transit time between UK and Trieste enables Bahr, Behrend to offer a very fast transit time through to Port Said at competitive rates.

The service also operates every 12 days to Alexandria with oncarriage to Cairo and other internal destinations in Egypt.

Further information: circle 774

Double-deck TIR trailers give 23-m cargo capacity

Originally developed for carrying agricultural machinery on international routes, double-deck TIR trailers designed and built by Cooks (Road Transport Engineers) of Rainham, offer some 56 m^2 of cargo deck equivalent to 23 linear metres at full trailer width. Full side access and a removable upper deck give a flexibility in the types of cargo which can be accepted.

So that the full-length upper deck would take up a minimum of cargo space when stowed, it was designed to sit on the lower deck in the reduced length behind the swan neck. To allow this, the floor of the upper deck forward of the swan neck can be folded and fastened to the headboard; the deck side bearers then telescope to the required length. The upper deck cargo area is 27 m^2 with a lower deck area of 29 m^2.

For easy cargo handling, to give minimum loading and discharge times, Cooks designed the trailer with gates to give full side access. These are of bolted construction and in-

News of services for exporters

If your company has recently introduced a new service for exporters – in, for example, the packing, forwarding, shipping, airfreighting, banking or translation fields – we would be glad to have details, plus a good black and white photograph where appropriate.

Items for inclusion in our fortnightly 'Export Services' feature should be addressed to the Overseas Editor, 'Trade and Industry', Room 439, 1 Victoria Street, London SW1.

Advertisers who wish to be associated with this feature should contact Dudley Masters on 01-242 9478.

Freepost reader service

For further information on items in this section, circle the corresponding number on the reader services page near the end of the magazine.

clude devices to limit damage on impact in the event of an accident. Another feature to limit impact damage is a shear pin device which ensures the collapsibility, on impact, of the topmost 30 cm of the trailer headboard.

Further information: circle 775

BR to boost Irish sea route . . .

British Rail Shipping has placed an order with Harland and Wolff, Belfast, for the construction of a multi-purpose ship to be delivered in spring 1979 for service on the Stranraer-Larne route.

The new ship, of 7000 tonnes, has been designed to carry 600 passengers and 60 lorries, or up to 300 cars or a mix of both. She will have two vehicle decks which can be operated simultaneously. Other features include a lounge and dining facilities for lorry drivers and cabins for 30 passengers.

In 1976, the Stranraer-Larne service carried 107 000 lorries and trailers, 15 000 trade cars, 116 000 private cars and 733 000 passengers.

Further information: circle 776

. . . and adds new Sealink ship for Ostend services

A new Sealink ship *Prins Albert* was launched on 14 September and will join the Sealink fleet next March on the Dover/Folkestone-Ostend routes.

Costing 900 million Belgian francs (about £14 million), the *Prins Albert*, of over 5000 tons, is a multi-purpose ship built for the Belgian Maritime Transport Authority and has been designed to carry 1400 passengers and 250 cars or 37 road haulage vehicles.

The *Prins Albert* is the fifth new multi-purpose ship ordered by the Belgian partners of Sealink. The first, *Prins Philippe* entered service in 1973, followed by *Prince Laurent* in 1974, and *Prinses Maria-Esmeralda* and *Princesse Maria-Christine* in 1975.

Further information: circle 777

B'ham-Irish Republic services stepped up

Surface groupage freight services from Birmingham to the Irish Republic by Alltransport International Group have been stepped up to two departures a week, with the introduction of a weekend service out of the group's Sheldon depot.

The groupage services which uses 12 m trailers on British Rail's Fishguard-Rosslare or Holyhead-Dun Loaghaire ro-ro services, give delivery times of between 36-48 hours.

Goods departing on the service from Sheldon on Wednesdays arrive at their destinations on Thursday or Friday, with the new weekend service departing Birmingham on Fridays for delivery on the following Monday morning. Distribution in the Irish Republic is handled through Alltransport's Dublin agent.

Further information: circle 778

Lep expands in Sussex

Lep Transport has recently formed an export shipping department to cater for the expansion of industry in Sussex.

At the Lep Group's airfreight offices in Crawley, the department will concentrate on exporters requiring surface freight forwarding facilities covering both continental and deep sea destinations utilising groupage and full container loads.

Further information: circle 779

Wynns move 310-ton generator

Transport specialists Robert Wynn and Sons have successfully completed the move of a 310-ton electrical generator stator from generator division of GEC Turbine Generators at Stafford to Pomona docks, Manchester, where a ship was waiting to take it to the United States for installation in the new San Onofre power station of Southern California Edison Co.

To move the stator, Wynns used two Scammell Contractor tractors and a swan-neck girder transporter, supported by two seven-axled bogies. Air-cushion equipment was employed to reduce the weight on the axles to enable the road train to pass over the sub-standard bridges on the route, which was the Department of Transport's recognised heavy load route between Stafford and Manchester, using parts of the A34 and the A50.

It took over three days for the road train, which had an overall length of 196 ft and a gross weight of 455 tons, to cover the 70 miles.

Further information: circle 780

Metap to tour ME

Metap (Services) Ltd is mounting a mobile trade exhibition to tour the Middle East. The object is to carry out market surveys and seek business for consumable and consumable durable products in areas of the Middle East not normally visited by export salesmen.

The tour, using a caravan, will visit towns in Egypt, Jordan, Syria, Lebanon, Saudi Arabia, Qatar and Kuwait in November, December 1977, and January 1978.

With distribution outlets and regional offices in Cairo and Amman, Metap (Services) Ltd is interested in making contact with small to medium-sized manufacturers, who have no export facilities.

Further information: circle 781

New ME agency links for MACL

Under the new Middle East agency agreements Meadows Air Charter Ltd (MACL) and its sister Meadows group company Meadows Airfreight are represented in Dubai, UAE, by Yusuf bin Ahmed Kanoo, and in Amman, Jordan by Amin Kawar and Sons.

Further information: circle 782

MIDDLE EAST CONSTRUCTION

The Middle Eastern markets are THE markets for enterprising exporters. MIDDLE EAST CONSTRUCTION has rapidly established itself as THE English language monthly medium through which British firms can influence the specification and sale of their products, services and expertise. Every edition produces hundreds of worthwhile enquiries from construction readers in the oil rich states which are forwarded to our advertisers.

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ENCIRCLE TI 597 ON PAGE 592 FOR FURTHER INFORMATION

Overseas trade country data

Australia

Screws for wood. The Department of Industry and Commerce has received a request for temporary protection against the import into Australia of screws for wood (tariff items 73.32.910 steel and 74.15 copper). Requests for temporary protection are initially considered by the department and at a later stage they may be referred to the Temporary Assistance Authority (TAA) for inquiry and report within 30 days of the date of the reference.

Any temporary protection which may be awarded on the recommendation of the TAA is in the nature of holding action pending government consideration of long-term protection of the local industry.

Interested parties who wish to make their views known on this application for temporary protection should write to the Department of Industry and Commerce, Canberra, ACT 2600, without delay.

Inquiries: CRE 01-215 5319.

Ref: CRE 1527/77

Headwear and foundation garments. A notice in *Trade and Industry*, 19 August 1977 reported that the Industries Assistance Commission had announced details of arrangements for public hearings on certain of the draft reports following the inquiry into the question of protection for the textiles, clothing and footwear industries.

Within the framework of that inquiry, the commission has now issued the following additional draft reports:

Part E – Headwear
Part F – Foundation garments

The draft reports have been released to give interested parties an opportunity to examine and comment on them before the report is finally settled. A further public hearing will be arranged at a later date to consider submissions. A copy of the draft report may be obtained on loan from the Department of Trade, Room 336, 1 Victoria Street, London SW1H 0ET.

Inquiries: CRE 01-215 5319.

Ref: CRE 671/77; 673/77

Brazil

Rhodesian chrome. Customs Policy Council resolution 3013, published in the *Diario Oficial* of 30 August, laid down that imports of chrome ore, under tariff heading 26.01.14.00, ferro-chrome, under tariff heading 73.02.04.00, and special steels having a content of more than 3 per cent of chrome, under tariff heading 73.15.00.00, must be accompanied by a certificate from the exporter and duly visaed by the appropriate authority in the country that the product does not contain chrome of Rhodesian origin.

Before customs clearance such products must be submitted to a technical examination for identification of origin.

Inquiries: OTAR 01-248 5757 ext. 476/474.

Duty reduction. Customs Policy Council resolution 3007, published in the *Diario Oficial* of 16 August, reduced the import duty on styrene, under tariff heading 29.01.35.00, from 50 per cent to 25 per cent for a period of six months. The concession will lapse on 16 March 1978.

Inquiries: OTAR 01-248 5757 ext. 476/474.

Proposed duty reduction. Customs Policy Council edital 864, published in the *Diario Oficial* of 26 August, gave notice that the council was considering a proposed reduction in import duty on polyester film, non-sensitised, for the manufacture of radiographic film, under tariff heading 39.01.04.99 'ex', of from 85 per cent to 0 per cent.

Inquiries: OTAR 01-248 5757 ext. 476/474.

Proposed duty increases. Various Customs Policy Council editals have given notice that the council are considering the following duty increases:

On models for instruction in anatomy, which are classified under tariff heading 90.21.03.00: head, urinary tract, digestive tract, circulation system, male reproductive system, female reproductive system, auditory tract and brain. The proposed increase is from 0 per cent to 30 per cent.

On natural calcium phosphates, natural aluminocalcics, apatite and phosphated chalk, under tariff heading 25.10.00.00, as follows:

Tariff no./Goods	Duty proposed (The current duty is in brackets)
25.10.00.00	
Natural calcium phosphates, natural aluminocalcics, apatite and phosphated chalk:	
01.00 Unmilled	30% (0%)
02.00 Milled	40% (10%)

On orthophosphoric acid under tariff heading 28.10.02.03 from 15 per cent to 45 per cent.

On radiographic films, sensitised on both sides, for medical use, under tariff headings 37.01.01.00 'ex' and 37.02.01.00 'ex', from 9 per cent to 39 per cent.

On sensitised aluminium photographic plates for monochrome reproduction, under tariff heading 37.01.02.00 'ex' from 15 per cent to 45 per cent.

Inquiries: OTAR 01-248 5757 ext. 476/474.

Duty exemptions. Customs Policy Council resolutions 3005 and 3000, published in the *Diario Oficial*, exempted from duty:

A quota of 5000 tonnes of 99 per cent pure unmilled, 'clinker' type rutile titanium dioxide, under tariff heading 28.25.01.02. The exemption has a period of validity of one year and lapses on 16 August 1978.

Further information

In many cases further information on the notices published on these pages is available to British exporters from the Department of Trade. The main branches concerned are: Commercial Relations and Exports (CRE) Divisions, 1 Victoria Street, London SW1H 0ET (tel: direct dialling); and Overseas Tariffs and Regulations Section (OTAR), Export Data Branch, Export Services and Promotions Division, Export House, 50 Ludgate Hill, London EC4M 7HU (tel: 01-248 5757). In each case, the relevant information source is indicated at the end of the notice by its initials (OTAR or CRE) and, in the case of OTAR, the telephone extension.

Exempted from import duty phosphorus pentasulphide, under tariff heading 28.15.01.00 'ex'.

Inquiries: OTAR 01-248 5757 ext. 474/476.

Reference prices. Customs Policy Council resolutions 3008 and 3011 published in the *Diario Oficial*, established the following reference prices:

Tariff no/Goods	Reference price
29.40.09.00	
Pepsin 1 : 3000 NF	US $ 17.40 per kg
Pepsin 1 : 10 000 NF	US $ 59.40 per kg
90.03.01.02	
Frames and mountings of plastic materials, whether or not having base metal, gilded, silvered or plated with precious metals	US $ 8.50 each
90.03.01.03	
Frames and mountings of base metal, whether or not gilded, silvered or plated with precious metals	US $ 9.20 each
90.03.02.99	
Parts and components of plastic materials, whether or not having base metals whether or not gilded, silvered or plated with precious metals	US $ 231.90/kg
Parts and components of base metal whether or not gilded, silvered or plated with precious metals	US $ 294.20/kg
90.04.04.00	
Corrective spectacles of plastic materials	US $ 13.60 each
90.04.99.00	
Protective goggles, for non-professional use, of plastic materials	US $ 13.60 each
Protective goggles, for non-professional use, of base metal, whether or not gilded, silvered, or plated with precious metals	US $ 14.00 each
Corrective spectacles, of base metal, whether or not gilded, silvered or plated with precious metals	US $ 14.00 each

Inquiries: OTAR 01-248 5757 ext. 476/474.

Chile

Exchange rates. The Chilean Central Bank has established the daily rate of exchange for the period 5 September to 4 October.

Copies of the list are available from CRE 01-215 5289.

CRE tel. Direct dialling
OTAR telephone 01-248 5757
Extensions to **OTAR** numbers are given at the end of each notice

Denmark

VAT. As from 3 October value added tax in Denmark will be increased from the present rate of 15 per cent to 18 per cent.

Inquiries: OTAR 01-248 5757 ext. 7174.

France

Certificate of origin requirements. A notice published in the French *Official Journal* of 6 September 1977 advised importers that as from 14 September 1977 certificates of origin will be required for products falling under the following CCCN headings:

Chapters 30, 60, 61, 62 and 97 – whole chapters; headings 66.01, 84.19 A, 84.40 BI, 84.41 AI, 85.06, 85.12, ex 85.14 (loudspeaker enclosures), ex 85.15 AIII (radio and television receivers whether or not combined with a sound recorder or reproducer), ex 90.17 (radiology and electro-medical apparatus), 90.28.

For intra-community trade certificates should conform to the model annexed to regulation EEC 582/69 as amended by regulation EEC 518/72.

For imports from third countries they should satisfy the requirements of article 9 of regulation EEC 802/68 as amended by regulation EEC 1318/71.

Copies of the French text of this notice can be obtained from OTAR 01-248 5757 ext. 423.

Greece

Rolled iron sheets. According to the Greek press of 27 July, cold-rolled iron sheets of a thickness of up to 4.5 mm, which are imported by certain factories in Greece, are now subject to an import duty rate of 15 per cent, instead of the previous rate of 24.5 per cent.

Inquiries: OTAR 01-248 5757 ext. 439.

Iraq

Population census. It has been announced that a population census will be held in Iraq on Monday, 17 October. All government departments and private sector business will be closed on that day.

Vaccination. Vaccination against cholera is now compulsory for entry into Iraq. This is a temporary measure introduced because of the current outbreak of cholera in a number of Middle East countries.

Inquiries: CRE 01-215 3454.

Japan

Drug usage directions. The Japanese Ministry of Health and Welfare has established guidelines for the directions to be printed in Japanese on the packaging of drugs sold over the counter.

Manufacturers and importers have been asked to conform to these guidelines within one year from 10 August, no further details are available but the directions in Japanese are normally provided by the importers who should be aware of the details of the new guidelines.

Inquiries: OTAR 01-248 5757 ext. 420/475.

Roller skates. The Japanese authorities have introduced safety measures for roller skates, and the essential requirements are given below:

1 Skates must be fitted with a toe stop (except when being used in competition races).
2 There must be no side projections beyond the wheels.
3 The adjustable slide-rail must be capable of being firmly locked in place and there must be no play between it and the plate.
4 The slide-rail must not project beyond the plate.

Full details (in Japanese) of the regulations are available from OTAR 01-248 5757 ext. 420/475.

Malta

Beer regulations. The Maltese authorities have published regulations relating to the sale of beer. They detail the permitted additives and consistency of beer.

Although the regulations are not yet in force, British exporters are advised to follow them closely as they are already being unofficially enforced as a matter of policy by the Maltese authorities.

British exporters may obtain a copy of the above regulations from OTAR section.

Inquiries: OTAR 01-248 5757 ext. 458/461.

New Zealand

Documentation. Exporters should be aware that the gradual phasing out of the tariff preference for British goods imported into New Zealand was completed on 1 July 1977. As from that date British goods with the exception of motor vehicles and some other automotive products will be subject to the normal tariff rate of duty.

Where the normal rate of duty applies, there is no need for overseas suppliers to complete a certificate of origin. The customs invoice (form 55) should, if possible, be combined in a single document with the certificate of value (form 56) or be securely affixed to it and identifiable with it. The wood packing declaration (form 5) may be similarly presented.

The old British preferential forms can still be used.

Inquiries: OTAR 01-248 5757 ext. 401/468/469.

Nigeria

Exchange control. Government notice 994 published in the Federal Republic of Nigeria *Official Gazette* of 8 August 1977 promulgates the Exchange Control (Anti-Sabotage) Decree 1977.

It is the Federal Military Government's intention to stamp out all abuses of the foreign exchange regulations, including irregular invoicing practices and the conduct of foreign exchange transactions except through authorised dealers.

Inquiries: CRE 01-215 3064.

Pakistan

Import policy 1977/78. Copies of the Import Policy Order that came into effect on 1 July have been received. A liberalised trend has been maintained and the pattern of a 'free' list and a 'tied' list is continued. The major features of the new measures which are marginal are as follows:

1 Tallow previously importable by industrial consumers only, now importable by all registered importers.
2 Certain machinery for balancing, modernising and replacement previously only available to the cotton textile industry may now be imported by other textile industries, ie woollen, synthetic and jute.
3 The financial ceiling of Rs 25,000 for the import of machinery and mill-work and parts and accessories is revised to Rs 50,000 (Rs 16.35 = approximately £1).
4 Electric motors of all sizes and specifications (ex CCCN 85.01) can now be imported.
5 There are no additions to the free list and no other increases in financial ceilings than that specified at 3 above.

Another notice will be published shortly about changes in import duties.

Inquiries: OTAR 01-248 5757 ext. 420/475.

Portugal

Foreign investment code. The Portuguese foreign investment code, published on 6 April 1976 has been revised and a new code has been published as decree-law 348/77 of 24 August. An unofficial translation of the new code is available from CRE 01-215 5341.

Spain

Anhydrous ammonia. The Spanish *State Gazette*, 29 August, published royal decree 2198/1977 of the Ministry of Commerce, establishing a duty-free quota for the importation of 75 600 tonnes of anhydrous ammonia to be used in the manufacture of fertilisers – CCCN 28.16A.

The above quota will have a validity period of six months from 29 August, and the Ministry of Commerce will be responsible for the allocation of import licences in this connection.

Inquiries: OTAR 01-248 5757 ext. 461/458/459/460.

United States

Food additive. The *Federal Register*, 30 August, published a rule proposed bythe FDA to generally recognise as safe (Gras) aconitic acid and malic acid as food additives. Written comments (four copies) should be sent by 31 October to Food and Drug Administration, Room 4-65, 5600 Fishers Lane, Rockville, MD 20857.

A copy of the text is available from OTAR 01-248 5757 ext. 456/457/7312.

Food labelling. The *Federal Register*, 26 August 1977, published rules proposed by the FDA to permit all ingredients acting as leavening agents to be listed by their common names. Written comments (four copies) by 25 October 1977, to Food and Drug Administration, Room 4-65, 5600 Fishers Lane, Rockville MD 20857.

A copy of the text is available from OTAR 01-248 5757 ext. 456/457/7312.

Origin marking on consumer electronic products. The *Federal Register*, 2 September, published a notice by the United States Customs Service extending to 3 October 1977 the period for the submission of comments on the proposal to change the country of origin marking requirements on radios, stereo systems, television sets and other similar electronic products.

A copy of the text is available to British exporters.

Inquiries: OTAR 01-248 5757 ext. 456/457/7312.

Lead content in paint. The *Federal Register*, 1 September 1977, published a final rule by the Consumer Product Safety Commission banning paint and similar surface coating materials containing more than 0.06 per cent lead. The rule becomes effective 28 February 1978.

A copy of the text is available from OTAR 01-248 5757 ext. 456/457/7312.

Toys: sharp edges. The *Federal Register*, 1 September 1977, published a regulation proposed by the Consumer Product Safety Commission that would identify sharp metal or glass edges on toys for use by children under eight years of age. Written comments (five copies) by 3 October 1977 to the Secretary, Consumer Product Safety Commission, 1111 18th Street NW, Washington DC 20207.

A copy of the text is available from OTAR 01-248 5757 ext. 456/457/7312.

Saccharin. The *Federal Register*, 2 September, published a notice by the Food and Drug Administration extending to 3 October 1977 the period during which comments on the proposal to restrict the use of saccharin may be submitted.

A copy of the text is available to British exporters.

Inquiries: OTAR 01-248 5757 ext. 456/457/7312

Motor vehicle safety standard 571. The *Federal Register*, 29 August 1977, published details of an advanced notice proposed by the NHTSA to amend standard 571 providing improved rear end protection on heavy motor vehicles to prevent under-riding of following vehicles. Written comments (four copies) by 30 November 1977 to Bureau of Motor Carrier Safety, Room 3402, 400 Seventh Street SW, Washington DC 20590.

A copy of the text is available from OTAR 01-248 5757 ext. 456/457/7312.

Noise emission standards on solid waste trucks. The *Federal Register*, 26 August 1977, published rules proposed by the EPA for noise emission standards for truck-mounted solid waste compactors. Written comments by 25 November 1977 to Standards and Regulations Division, Office of Noise Abatement and Control, US Environmental Protection Agency, Washington DC 20460.

A copy of the text is available from OTAR 01-248 5757 ext. 456/457/7312.

OTAR: help for exporters

Overseas Tariffs and Regulations Section (OTAR), Export Services and Promotions Division, Department of Trade, Export House, 50 Ludgate Hill, London EC4M 7HU, tel. 01-248 5757 can give you directly, or through your Regional Office, up-to-date information on the tariffs and customs regulations of overseas countries, import licensing regulations and restrictions including import quotas; certificate of origin; consular invoices and fees; labelling and marking requirements; foodstuffs, drugs and pharmaceuticals, agency legislation, setting up of a subsidiary company and the imports of samples. It also provides information, in collaboration with the Ministry of Agriculture, Fisheries and Food, on health regulations for livestock, meat, animal products and plants and seeds. In short, OTAR can help on almost all legislation which affects the entry of British goods into overseas countries.

Inquiries which concern the countries of more than one sub-section (excluding inquiries involving only EEC countries) should be made to OTAR's co-ordination sub-section on 01-248 5757 extension 452 or 454.

For information on specific countries, phone the number and extension given below

01-248 5757

extension

Sub-section A
1 Co-ordination of EEC regulations requirements and common customs tariff (CCT)
Denmark, France incl. overseas territories, Greece, Turkey, Cyprus

408 EEC legislation on tariff and non-tariff barriers relative to community trade
7174 EEC common agricultural policy – aspects affecting exports. Denmark (incl. Faroe Islands and Greenland)
423 France and French overseas departments, French overseas territories
439 Greece (incl. Dodecanese Islands), Turkey, Cyprus

2 Benelux, Dutch overseas territories, Irish Republic, Italy, Federal Republic of Germany

288 Belgium, Luxembourg, Netherlands, Netherlands Antilles, Aruba, Bonaire, Caracas, St Eustatius, St Martin (Dutch), Saba, Surinam,
466 Italy, Irish Republic
467 Federal Republic of Germany

Sub-section B
Efta countries, Spain, Gibraltar, Malta, Israel, Eastern Bloc, China, Mongolia, Yugoslavia, Macao

458 Israel, Norway, Gibraltar, Malta
459 Austria, Sweden, Switzerland
460 Portugal, Finland, Iceland, Macao, Albania, Bulgaria, Czechoslovakia, German Democratic Republic, Hungary, Poland, Romania, USSR, China, Mongolia, Yugoslavia
461 Spain, Canary Islands, Andorra

Sub-section C
1 North America, Bahamas, Bermuda, West Indies

455 Canada
456 USA (incl. Alaska, Caroline Islands, Guam, Hawaii, Mariana Islands, Marshall Islands, Panama Canal Zone, Puerto Rico, Samoa (US), Virgin Islands (US), Wake Island)
7312 Anguilla, Antigua, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, St Kitts/Nevis, St Lucia, St Vincent, Trinidad and Tobago, Turks and Caicos Islands

2 South and Central America

474 Argentina, British Antarctica Territories and Antarctica, Cuba, Dominican Republic, Falkland Islands, Haiti, Paraguay, Uruguay, Bolivia, Chile, Colombia, Ecuador, Peru, Venezuela
476 Brazil, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama

Sub-section D
Africa

462 Algeria, Libya, Morocco, Tunisia
471 Angola, Egypt, Mozambique, Mauritius, Rwanda, Seychelles, South Africa (with S.W. Africa, Lesotho, Swaziland and Botswana), Somalia, Sudan St Helena and Tristan da Cunha and Ascension Islands, British Indian Ocean Territory
472 Burundi, Cameroon, Central African Empire, Ceuta and Melilla, Chad, Congo (Brazzaville), Madagascar; Equatorial Guinea, Ethiopia, Benin, Gabon, Ivory Coast, Guinea, Kenya, Uganda, Tanzania, Mali, Mauritania, Niger, Senegal, Togo, Upper Volta, Western Sahara, Zaire
473 The Gambia, Ghana, Liberia, Malawi, Nigeria, Rhodesia, Sierra Leone, Zambia

Sub-section E
Australasia and South East Asia

401 New Zealand, Singapore, Thailand, W. Samoa, Chatham Islands, Cook Islands, Niue Islands, Tokelau Islands
468 Australia, Solomon Islands, Cocos (Keeling) Islands, Christmas Islands (Indian Ocean), Nauru, New Hebrides, Papua New Guinea, Philippines
469 Brunei, Fiji, Hong Kong, Indonesia, Malaysia, Tonga, Gilbert Islands (includes Ocean Islands, Phoenix Islands, Line Islands), Tuvalu, Norfolk Island, Pitcairn Island

Sub-section F
Middle East (Part) and Asia (Part)

420 Afghanistan, Bangladesh, Burma, India, Nepal, Pakistan, Japan, Korea Democratic Peoples Republic, Korea Republic of, Sri Lanka, Taiwan, Yemen Arab Republic, Yemen Peoples Democratic Republic
475 Iraq, Jordan, Kampuchea (formerly Cambodia), Kuwait, Laos, Lebanon, Vietnam Socialist Republic of, Bahrain, Iran, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates

European community news

Commission puts forward proposals on fluorocarbons

A draft recommendation on fluorocarbons and the environment has been submitted to the council by the commission. Fluorocarbons, mainly used in propellants for aerosols and in refrigeration, air-conditioning equipment and in the manufacture of foam plastics have been the subject of some recent studies which suggest their emission may have an effect in reducing the ozone layer of the stratosphere.

The commission proposals, which are very much in line with the Department of the Environment paper on the subject [1], recommend that member states should pursue and intensify research on a community basis; take immediate steps to encourage industries using the chemicals chlorofluoromethane F11 and F12 to step-up research into alternative products and devices; encourage industry and consumers to eliminate all leakage; and prevent any increase in the production capacity of these chemicals.

The commission also states that it is undertaking a comprehensive study of the economic and social impact of possible measures to regulate fluorocarbons and aerosols, is funding scientific research in member countries and will make the results available in the second half of 1978 with a view to formulating a community policy.

[1] Department of the Environment Pollution Paper No. 5 'Chlorofluorocarbons and the effect on the stratosphere' available from HMSO.

Transport experts meet in London

William Rodgers, Secretary of State for Transport, will welcome more than 350 international transport experts from 23 countries on 26 September when he opens the Seventh International Symposium of the European Conference of Ministers of Transport (ECMT) at Imperial College, Kensington.

The four-day symposium (26 to 29 September) which will be held in the great hall of the college will discuss the contribution of economic research to transport policy decisions. The papers to be presented and discussed include the evaluation of demand; optimal use of transport network; and the practical and theoretical aspects of investment priorities.

A transport exhibition in the junior common room of the Sherfield Building will include displays and models from the British Railways Board, Greater London Council, London Transport, Transport and Road Research Laboratory and Tyne and Wear County Council. Other displays cover cargo handling, national air traffic training and transport consultancy services.

In the programme of events arranged for the delegates during their stay in the United Kingdom is a visit to Bath by British Rail's high-speed train.

Member countries of the ECMT are: the nine EEC member states, Austria, Finland, Greece, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and Yugoslavia. United States, Japan, Canada and Australia are associate members.

Two EIB loans for BSC

Two loans totalling the equivalent of £11.4 million (17.3 million units of account) have been granted by the European Investment Bank to the British Steel Corporation for terms of 12 years at an interest rate of 8⅞ per cent.

They will help to meet the cost, estimated at about £23 million, of modernisation and rationalisation of iron foundries at Distington works, Workington (Cumbria, NW England) and Fullwood (near Motherwell, Scotland) and at a steel foundry at Craigneuk (also near Motherwell).

The modernised iron foundries will be able to operate much more economically and to meet statutory environmental requirements which come into force next year. The steel foundry at Craigneuk is being expanded and improved, permitting the closure of a foundry 10 miles away at Tollcross; measures will also be taken to reduce air pollution.

Suspension of CCT on beta-Alanine proposed

The Department of Trade is considering an application for a new suspension of the common customs tariff (CCT) on *beta*-Alanine, under tariff heading 29.23 D V, on the grounds that this material is not available from within the European Economic Community.

The application, which relates to the period 1 July 1978 to 30 June 1979, is for total suspension of the CCT. If any UK companies are already manufacturing the goods (or like or competing goods) or expect shortly to be in production, so that their interests would be adversely affected by a suspension of the CCT, they should notify the Department of Trade, General Division, Kingsgate House, 66/74 Victoria Street, London SW1E 6SJ, tel. 01-215 3576, quoting the reference G/T 16199. This information should reach the department not later than 7 October.

EEC-Spain agreement: horticultural products

The UK has been applying the tariff provisions of the 1970 EEC-Spain agreement to most goods imported from Spain since 1 July 1977 (see *Trade and Industry*, 15 July 1977, page 65).

The details of the tariff regime applicable to horticultural products have recently been settled and will come into force on 1 October 1977. The Import Duties (Spain) (Reductions and Exemptions) Order 1977 (SI no. 1499/77) which comes into operation on 1 October will provide for the concessionary rates of import duty applicable to certain horticultural goods of Spain up to the end of 1977 in accordance with the 1970 agreement.

The effect of this order will be that the concessionary rates of duty for a number of horticultural products will be removed but in the case of a range of products of particular interest in UK-Spanish trade for which no concessions are granted in the 1970 agreement (ie cucumbers, tomatoes, table grapes, tomato concentrate, mandarin segments and fruit salad) the existing concessionary rates of duty will continue in force until 31 December 1977.

Inquiries should be addressed to the Department of Trade, General Division, Room 310, Kingsgate House, 66-74 Victoria Street, London SW1E 6SJ, tel. 01-215 5527.

More community news

Information on European community matters and about member states can often be found in other sections of *Trade and Industry*. For this week's additional news, turn to the following pages:

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New publications
EEC market intelligence 542

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Building research – integrity and energy saving 544

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British designers break records overseas 552

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Good business at Frankfurt 558
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Statistics

The economy: selected indicators

Series are seasonally adjusted except where shown otherwise

	Gross domestic product (average estimate)	Consumers' expenditure	Fixed capital expenditure			Changes in stocks				Balance of payments		
			Total	of which: Manufacturing industry	of which: Distributive and service industries excl. shipping	Total	of which: Manufacturing industry	Wholesalers	Retailers	Current balance	Visible balance	Invisible balance
	at 1970 prices		at 1970 prices			at 1970 prices				at current prices		
Base of index Series in Stock level at end-1976	1970	£ million	£ million			18,041	10,529	1,830	1,929	£ million		
1970	100.0	31,696	9,453	2,130	1,799	444	325	68	−16	695	−25	720
1971	101.8	32,675	9,682	1,991	1,930	92	−148	52	18	1,058	280	778
1972	104.2	34,542	9,797	1,738	2,071	34	−145	48	15	105	−702	807
1973	110.4	36,062	10,253	1,753	2,414	1,321	597	102	379	−922	−2,353	1,431
1974	109.5	35,361	10,287	2,028	2,414	596	634	81	−109	−3,565	−5,194	1,629
1975	107.8	35,257	10,062	1,744	2,034	−743	−429	−111	−65	−1,701	−3,203	1,502
1976	110.1	35,405	9,724	1,659	1,974	66	5	23	9	−1,405	−3,571	2,166
1975 1st qtr.	109.3	8,989	2,555	472	516	−173	−31	−23	−44	−565	−944	379
2nd qtr.	108.0	8,880	2,484	446	513	−213	−74	−51	−61	−333	−657	324
3rd qtr.	106.6	8,739	2,562	420	512	−213	−209	−26	16	−620	−974	354
4th qtr.	107.3	8,649	2,461	407	494	−147	−115	12	24	−183	−628	445
1976 1st qtr.	110.1	8,829	2,489	405	471	44	0	26	33	−90	−538	448
2nd qtr.	109.6	8,797	2,425	407	489	−57	−66	−20	−45	−390	−907	517
3rd qtr.	109.8	8,880	2,435	421	506	−1	−2	14	16	−511	−1,144	633
4th qtr.	110.8	8,899	2,375	426	508	80	73	3	5	−414	−982	568
1977 1st qtr.	109.2	8,773	2,242	419	507	179	125	51	72	−461	−962	501
2nd qtr.	110.3 p	8,655p	2,225	432 p	512 p	146	128 p	29 p	−5 p	−204	−696	492
% change last 2 qtrs. on prev. 2 qtrs.	−0.5	−2.0	−7.1	+0.5	+0.5							
on a year earlier	−0.1	−1.1	−9.1	+4.8	+6.1							

	Industrial production		Personal expenditure		Prices and earnings					Labour (UK)			Visible trade (Volume)	
	Total all industries	Total manufacturing industries	Retail sales	Cars: new registrations	Retail prices	% increase on a year earlier	Wholesale prices: all manufacturing industry: basic materials and fuel used	Wholesale prices: all manufacturing industry: manufactured products: home sales	Average gross earnings of all employees (GB, all industries and services covered)	Unemployed excluding school leavers and adult students: mid-month count	Unemployed excluding school leavers and adult students: % of total employees	Unfilled vacancies for adults: mid-month count	Export	Import
	at 1970 prices		at 1971 prices	monthly averages	(not seasonally adjusted)				(old series)				at 1970 prices	
Base of index £m in base year Series in	1970	1970	1971 15,895	thousands	Jan. 1974		1970	1970	Jan. 1970	thousands		thousands	1970 7,907	1970 7,932
1971	100.3	99.4	100.0	108.5	153.4†	9.4	104.6	109.0	119.4	775.8	3.4	130.9	106.7	104.2
1972	102.5	102.0	105.8	138.6	164.3†	7.1	109.2	114.8	134.8	854.9	3.7	147.3	107.1	116.7
1973	110.0	110.6	110.7	137.1	179.4†	9.2	144.5	123.2	152.6	611.0	2.6	307.0	122.2	133.8
1974	106.9	108.9	109.9	102.8	108.5	16.0	215.3	152.0	179.6	599.7ø	2.6ø	302.7ø	132.0	136.4
1975	101.7	102.4	107.9	97.2	134.8	24.2	235.4	188.7	227.6	929.0	3.9	150.0ø	126.1	126.5
1976	102.2	103.4	108.1	104.7	157.1	16.5	299.0	219.6	263.3	1,269.8ø	5.4ø	120.4ø	136.6	134.3
1976 1st qtr.	101.4	101.6	107.3	103	149.4	22.5	266.5	206.9	250.9	1,220.3	5.2	116.7	132.2	126.2
2nd qtr.	102.5	103.6	107.6	106	154.9	16.0	292.6	214.4	258.6	1,252.1	5.3	119.4	137.8	134.7
3rd qtr.	101.8	103.8	108.9	97	158.5	13.7	306.8	223.2	265.5	1,305.5	5.5	123.6	134.9	138.0
4th qtr.	103.1	104.7	108.5	113	165.8	15.0	329.9	233.9	272.8	1,316.8ø	5.6ø	..	141.5	138.2
1977 1st qtr.	103.6	105.6	105.0	104	174.1	16.5	341.5	248.0	280.2	1,330.2	5.6	..	141.2	142.3
2nd qtr.	102.0	102.9	103.9	102	181.9	17.4	347.8	259.2	285.3	1,330.4	5.6	159.2	149.3	143.9
1976 July	101.8	104.0	108.8	91	156.3	12.9	302.0	219.8	263.1	1,288.9	5.5	118.6	131.1	139.5
Aug.	101.2	103.1	108.9	115	158.5	13.8	304.0	223.4	267.2	1,308.8	5.6	126.2	135.6	133.8
Sept.	102.3	104.3	108.9	86	160.6	14.3	314.4	226.3	266.1	1,318.7	5.6	125.9	138.0	140.5
Oct.	102.7	104.8	108.1	109	163.5	14.7	327.7	230.0	269.0	1,307.9	5.5	124.5	141.6	140.7
Nov.	103.3	104.9	109.2	119	165.8	15.0	331.8	234.6	272.2	..	..	..	138.8	140.2
Dec.	103.4	104.4	108.3	111	168.0	15.1	330.2	237.2	277.1	1,325.7 e	5.6 e	..	144.1	133.7
1977 Jan.	103.7	105.5	106.7	93	172.4	16.6	337.8	244.9	278.1	1,338.2	5.7	..	141.5	153.8
Feb.	103.4	105.6	105.7	118	174.1	16.2	339.5	248.2	278.7	1,331.4	5.6	150.5	138.8	133.8
Mar.	103.6	105.8	103.1	102	175.8	16.7	347.2	250.8	283.8	1,321.1	5.6	157.3	143.3	139.4
Apr.	102.5	103.7	103.4	108	180.3	17.5	349.7	255.4	283.1	1,322.6	5.6	158.5	149.9	138.7
May	103.6	105.1	104.4	108	181.7	17.1	348.3	259.8	286.2	1,315.9	5.6	161.2	145.4	142.4
June	100.0	100.0	103.8	90	183.6	17.7	345.2	262.4	286.2	1,352.9	5.7	157.8	152.5	150.7
July	101.8 p	102.8 p	107.0	109	183.8	17.6	344.9 p	265.7 p	286.3 p	1,402.2	5.9	152.7	153.3	149.0
Aug.			107.0 p		184.7	16.5	340.0 p	268.0 p		1,413.8 p	6.0	154.1 p	150.2 p	131.2 p
Sept.										1,446.4.p	6.1	144.7 p		
% change latest 3 months on prev. 3 months	−1.3	−2.3	+2.1	−6.4	+2.7		−1.4	+3.9	+1.5	+6.8			+4	+2½
on a year earlier	−0.6	−1.2	−2.3	+5.1	+17.3		+13.7	+20.6	+9.5	+8.8			+12	+5

p Provisional pe Preliminary estimate † Base of index Jan. 1962 = 100 .. Not available ø Average of available months

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Record foreign arrivals in UK during April and May

During April and May 1977, the numbers of foreign visitors, including all travellers from the EEC countries, who arrived in the United Kingdom, were 847 000 and 890 000 respectively – a new record – according to figures released by the Department of Trade and the British Tourist Authority this week. The figures, which exclude visitors from the Irish Republic and Commonwealth citizens, represent an increase of 28 per cent for April, and 25 per cent for May, over the same months of 1976. Arrivals for the first five months of 1977 increased by 29 per cent, from 2 545 000 in 1976 to 3 283 000 in 1977.

Arrivals from the EEC countries in April of 495 000 were 28 per cent above the figure for April 1976. This was accounted for by large increases from France and Belgium/Luxembourg of 55 per cent and 47 per cent respectively. In addition arrivals from Denmark and Netherlands increased by 28 per cent and 26 per cent respectively.

In May arrivals from the EEC countries were 490 000, 22 per cent more than May of the previous year. Arrivals from Netherlands, and Belgium and Luxembourg, showed the largest increases, up by 45 per cent and 41 per cent respectively These were followed by West Germany (31 per cent), Denmark (23 per cent) and France (6 per cent). Arrivals from Italy however, were 1 per cent lower than in 1976. During the first five months of the year, the arrivals from the EEC countries were 1 825 000, 28 per cent above the same period in 1976.

Visitors from the rest of western Europe increased by 34 per cent during April to 149 000, and by 40 per cent during May, to 125 000 compared with the previous year. Arrivals for the first five months of the year increased by 46 per cent to 561 000. The largest increases were in arrivals from Austria (up by 38 per cent in April and 66 per cent in May), Switzerland (44 per cent and 58 per cent), Sweden (50 per cent and 39 per cent) and Finland (15 per cent and 66 per cent).

The number of visitors from the rest of the world increased by 23 per cent to 203 000 during April and by 26 per cent to 275 000 during May, the increase for the first five months of the year being 23 per cent. The increase in visitors from the United States continued steadily with rises of 25 per cent in April and 29 per cent in May, compared with last year, and over the first five months of the year were 26 per cent higher than in 1976. The number of visitors from Japan, after steadily declining through the second half of 1976, and the beginning of 1977, recovered to show an increase of 6 per cent in April. This trend was maintained in May with an increase of 30 per cent, and an overall increase during the year of 5 per cent.

Notes

The figures in the table are limited to foreign nationals, excluding Commonwealth citizens and citizens of the Irish Republic.

For non-EEC countries visitors entering for a stay of under one year are shown while, for EEC countries, total arrivals are shown irrespective of their purpose of visit or length of stay. This follows the entry of the United Kingdom into the EEC, since when citizens of community countries are generally admitted to the United Kingdom without having to state their purpose of visit, or expected length of stay.

Seasonally adjusted figures: simple comparisons of monthly figures between one year and another, or between adjacent months can be misleading. The seasonally adjusted figures provide a better basis for comparison with other months, or for judging current trends. In estimating the seasonal adjustments allowance has been made for changes in the seasonal pattern, which have been in the direction of a spreading of the tourist season, with some reduction in the summer peak relative to the rest of the year. Adjustment was also made for the effect of the varying date of Easter on numbers of western European visitors

The seasonally adjusted series are liable to revision when subsequent figures become available and should therefore, for the most recent months, be viewed with caution.

Foreign arrivals

Thousands per month

	Total arrivals from EEC countries (excluding Irish Republic)		Foreign visitors from non-EEC countries							
			Rest of western Europe (non-EEC)		United States		Other foreign countries		Total non-EEC countries	
1968	144		34		73		29		136	
1969	174		40		95		35		170	
1970	199		47		117		41		205	
1971	214		53		129		46		228	
1972	232		59		134		51		244	
1973	265		70		131		62		263	
1974	280		75		107		68		250	
1975	314		87		99		80		267	
1976	379		113		120		89		322	
1976	US	SA	UA	SA	UA	SA	UA	SA	UA	SA
January	176	324	54	98	53	113	55	83	163	294
February	172	343	56	99	46	121	56	107	158	327
March	293	358	73	104	70	108	66	80	209	292
April	387	353	112	100	99	115	66	83	276	298
May	402	374	90	98	141	121	78	82	308	301
June	426	380	132	102	174	117	101	87	406	306
July	749	375	217	105	204	114	166	94	587	313
August	592	368	141	108	187	124	151	92	479	326
September	364	360	114	108	191	132	112	82	417	322
October	367	417	128	130	124	128	81	83	334 r	341
November	315	450	127	154	85	128	68	100	280	382
December	304	444	107	145	67	120	71	98	244	363
1977										
January	224	435	84	151	68	144	66	100	217	395
February	260	495	89	156	56	147	61	116	206	419
March	355	412	113	154	85	131	85	103	283	388
April	495	456	149	160	123	143	79	99	352	402
May	490	456	125	140	181	154	94	99	400	393
Jan-May 1976	1 431		385		409		320		1 114	
Jan-Oct 1977	1 824		561		513		384		1 458	

Total arrivals = All persons admitted, including long stay and short stay visitors from EEC countries.
Foreign visitors = All persons entering for visits of under one year from non-EEC countries excluding Commonwealth countries.
UA = Unadjusted. SA = Seasonally adjusted. r = Revised. Source: Home Office.

New companies registered in August

Details of new companies registered in Great Britain during August 1977 showing nominal capital are shown in the table. Figures exclude unlimited companies and companies limited by guarantee.

Companies registered in Great Britain: August

Nominal capital	Total	Public companies	Private companies
Not exceeding £100	2 700	—	2 700
Over £100 but under £1 000	45	—	45
£1 000 but under £10 000	927	—	927
£10 000 but under £50 000	394	—	394
£50 000 but under £100 000	63	—	63
£100 000 but under £1 000 000	106	—	106
£1 000 000 and over	7	—	7
Total number	4 242	—	4 242
	£ thous	£ thous	£ thous
Total amount of nominal capital	42 331	—	42 331

Companies registered in Great Britain in 1976 and 1977

	1976		1977	
	Number	Nominal capital £ thous	Number	Nominal capital £ thous
January	3 476	21 780	3 225	30 825
February	4 088	19 228	4 330	34 505
March	6 190	41 680	5 843	49 266
April	4 150	22 354	5 499	41 860
May	4 343	25 095	4 097	27 086
June	5 624	25 815	4 169	61 951
July	4 954	58 659	4 172	34 238
August	4 221	44 690	4 242	42 331
September	4 377	25 342		
October	4 600	34 544		
November	4 667	60 549		
December	4 655	147 053		
Total	55 345	526 789		

Current account of the United Kingdom balance of payments for August

In August 1977 the current account is estimated to have been in surplus by £316 million. The surplus on trade in goods was £141 million, seasonally adjusted, and the balance on services and other transactions is estimated to have been running at a monthly surplus of about £175 million.

In the three months ended August 1977 there was a current account surplus of £128 million compared with a deficit of £147 million in the previous three months.

£ million seasonally adjusted

	Current balance	Visible balance: Trade in goods	Invisible balance: Services and other current transactions
1975	−1 701	−3 203	+1 502
1976	−1 405	−3 571	+2 166
1976			
1st qtr	−90	−538	+448
2nd	−390	−907	+517
3rd	−511	−1 144	+633
4th	−414	−982	+568
1977			
1st qtr	−461	−962	+501
2nd	−204	−696	+492
1977			
March	−76	−243	+167 b
April	+30	−134	+164 b
May	−101	−265	+164 b
June	−133	−297	+164 b
July	−55	−230	+175 a
August	+316	+141	+175 a
1977			
Mar-May	−147	−642	+495
June-Aug	+128	−386	+514 a

a These figures are or include projections and are subject to revision as information becomes available.
b One-third of the appropriate calendar quarter's estimate. Monthly figure of invisibles are not available.

Visible trade

Summary (figures on a balance of payments basis) (see tables 1 and 3)
In August, there was, erratically, a large surplus on visible trade of £141 million, seasonally adjusted, an improvement of £371 million on the July figure. This mainly reflected a fall in imports of £339 million from the comparatively high July level. Lower imports of diamonds, ships and aircraft were responsible for nearly half of this fall; in addition, imports of basic materials and of certain manufactured goods were down, also generally from high July levels. Total exports rose by £32 million.

In terms of volume, exports were down by 2 per cent in August, while imports fell sharply by 12 per cent. The export unit value index rose by 2 per cent in August, and the import unit value index fell by 1 per cent, leading to a 3 per cent rise in the terms of trade index.

In the three months ended August, the visible trade deficit was £386 million, compared with £642 million in the previous three months. This marked reduction, of £256 million, owed little to movements in the balance of trade in diamonds, ships and aircraft (which had affected the monthly figures). There was an improvement of £194 million in the balance of trade in oil, with exports up by £111 million and imports down by £83 million. Movements in North Sea installations adversely affected the change in the visible deficit by about £150 million between the three-monthly periods. Total exports were valued at £8,289 million, 7 per cent higher than in the previous three months, with volume up by 4 per cent. Total imports, at £8,675 million, showed an increase of 3 per cent in value and 2½ per cent in volume. Excluding North Sea installations, imports rose by 1 per cent in value, and show a marginal increase in volume. Between the two periods, the export unit value index increased by 2½ per cent and the import unit value index by 1 per cent, leading to a rise of 1 per cent in the terms of trade index.

Exports (Overseas Trade Statistics basis)
The three-monthly comparisons for some of the component series are affected by the inclusion in the July export figures, on an overseas trade statistics basis, of North Sea oil production installations valued at around £150 million, which are excluded from the figures on a balance of payments basis (see note 11). Where appropriate, the percentage movements of exports other than North Sea installations are given in brackets so that the area and commodity analyses can more readily be considered in relation to the movements of total exports on a balance of payments basis.

Area analysis (see table 4). In the three months ended August 1977, the value of exports to the developed countries was 7 per cent (4½ per cent) higher than in the previous three months. Deliveries to the EEC recovered after the July fall, and increased by 6 per cent between the three-month periods. The value of goods despatched to the rest of western Europe rose by 13 per cent (1½ per cent) in the latest three months. This comparatively small increase (excluding installations) partly reflects lower exports of precious stones. Exports to North America were 7 per cent higher, but shipments to the other developed countries were little changed. The value of goods despatched to the developing countries, in aggregate, increased by 9 per cent. Deliveries to the oil-exporting countries were 6½ per cent higher, while exports to the other developing countries rose by 12 per cent. Exports to the centrally planned economies fell by 1½ per cent from the high level in the previous three months.

Commodity analysis (see tables 5, 6 and 7). The value of exports of manufactured goods was 7 per cent (4½ per cent) higher in the three months to August than in the previous three months. Within this broad commodity group, exports of machinery and transport equipment rose in value by 11 per cent (6 per cent). Exports of machinery (the group which includes North Sea installations) were up by 16 per cent (8 per cent) in value and by 11 per cent (6½ per cent) in volume in the latest three months. The value of exports of road motor vehicles was unchanged, and deliveries of other transport equipment rose by 3 per cent. Taken together, the volume of transport equipment exports in total fell by 2 per cent. Chemical exports rose by 7½ per cent in value and by 5½ per cent in volume in this period, while the 2 per cent rise in the value of deliveries of metals reflected increased volume. Textile shipments rose in value by 4½ per cent, but volume fell by 1 per cent. The value of other manufactured goods exported fell by 4½ per cent, reflecting a lower level of pre-

Table 1 Visible trade on balance of payments basis

Seasonally adjusted values — £ million

	Exports (fob)	Imports (fob)	Visible balance
1975 r	19 461	22 664	−3 203
1976 r	25 416	28 987	−3 571
1975			
1st qtr r	4 664	5 608	−944
2nd r	4 632	5 289	−657
3rd r	4 828	5 802	−974
4th r	5 337	5 965	−628
1976			
1st qtr r	5 642	6 180	−538
2nd r	6 242	7 149	−907
3rd r	6 429	7 573	−1 144
4th r	7 103	8 085	−982
1977			
1st qtr r	7 440	8 402	−962
2nd r	8 036	8 732	−696
1977			
March r	2 504	2 747	−243
April r	2 649	2 783	−134
May r	2 612	2 877	−265
June r	2 775	3 072	−297
July r	2 741	2 971	−230
August p	2 773	2 632	+141
1977			
Mar-May	7 765	8 407	−642
June-Aug	8 289	8 675	−386
Percentage change*	+7	+3	

* Percentage change: latest three months on previous three months. p Provisional estimates. r Revised estimates.

Table 2 Invisibles¶

Seasonally adjusted values — £ million

	Credits	Debits	Invisible balance
1975	11 044	9 542	+1 502
1976	13 838	11 672	+2 166
1975			
1st qtr	2 645	2 266	+379
2nd	2 685	2 361	+324
3rd	2 757	2 403	+354
4th	2 957	2 512	+445
1976			
1st qtr	3 099	2 651	+448
2nd	3 314	2 797	+517
3rd	3 625	2 992	+633
4th	3 800	3 232	+568
1977			
1st qtr	3 752	3 251	+501
2nd	3 850	3 358	+492
1977			
July			+175 *
August			+175 *

¶ See note 6.
* These figures are projections and are subject to revision as the relevant statistical information becomes available.

cious stones despatched. Exports of non-manufactured goods, in total, rose by 16 per cent in value in the latest three months. Shipments of food, beverages and tobacco increased by 15 per cent, mainly reflecting increased volumes, while the value of deliveries of basic materials was unchanged, despite a rise in volume. Fuel exports increased sharply in value by 24 per cent, largely due to a 19 per cent increase in the volume of shipments, and reflecting an increase in the value of crude oil despatched, to £299 million in the latest three months.

Imports (Overseas Trade Statistics basis)

Commodity analysis (see tables 8, 10 and 11). In the three months ended August, the value of imports of food, beverages and tobacco rose by 1½ per cent compared with the three months March to May, entirely due to higher prices, particularly tea and sugar; volume was down by 4½ per cent. Fuel imports fell by 6 per cent in value reflecting increasing production of North Sea oil. Imports of industrial materials in total were 1 per cent up in both value and volume. Within the group, there was a continuing low level of imports of basic materials, with value showing a rise of only 1 per cent; volume was unchanged. Imports of chemicals rose by 6½ per cent in value and 4½ per cent in volume. The level of imports of other semi-manufactures in both value and volume terms was virtually unchanged, a substantial fall in arrivals of precious stones masking a rise in other imports. Imports of finished manufactures in aggregate were up by 19 per cent in value and 14 per cent in volume between the three month periods (7½ per cent and 7 per cent, respectively, excluding North Sea installations). Within this category, imports of machinery (the group which includes North Sea installations) rose by 25 per cent in value and 15 per cent in volume (3½ per cent and 2½ per cent, respectively, excluding such installations). The value of imports of road motor vehicles rose by 2½ per cent and there was a 46 per cent increase in other transport equipment, the result of a high level of imports of aircraft and ships. For these two groups combined import volume was up by 15 per cent. Arrivals

Table 3 Export and import unit value and volume index numbers on a balance of payments basis

Indices 1970 = 100

	Unit values (Not seasonally adjusted)			Volume (Seasonally adjusted)	
	Exports	Imports	Terms of trade†	Exports	Imports
1975 r	198.5	246.1	80.7	126.1	126.5
1976 r	240.6	300.3	80.1	136.6	134.3
1975 1st quarter r	184.9	240.9	76.8	129.4	127.9
2nd quarter r	193.4	241.5	80.1	123.2	122.0
3rd quarter r	202.2	247.5	81.7	121.8	128.4
4th quarter r	210.1	260.9	80.5	130.2	127.5
1976 1st quarter r	219.0	269.1	81.4	132.2	126.2
2nd quarter r	234.2	292.6	80.0	137.8	134.7
3rd quarter r	247.4	308.2	80.3	134.9	138.0
4th quarter r	261.7	331.0	79.1	141.5	138.2
1977 1st quarter r	274.5	341.4	80.4	141.2	142.3
2nd quarter r	280.9	350.7	80.1	149.3	143.9
1977 March r	276.8	345.8	80.0	143.3	139.4
April r	277.4	349.4	79.4	149.9	138.7
May r	282.5	350.1	80.7	145.4	142.4
June r	282.8	352.7	80.2	152.5	150.7
July r	283.9	354.4	80.1	153.3	149.0
August p	289.4	350.9	82.5	150.2	131.2
1977 March-May	278.9	348.4	80.0	146.2	140.2
June-August	285.4	352.7	80.9	152.0	143.6
Percentage change	+2½	+1	+1	+4	+2½

† Export unit value index as a percentage of the import unit value index.
p Provisional estimates. r Revised estimates.

Table 4 Exports: areas¶ Overseas Trade Statistics basis

Seasonally adjusted values — £ million fob

		Developed countries				Developing countries		
	Total	EEC	Rest of W. Europe	North America	Other	Oil-exporting countries	Other	Centrally planned economies
1976	25 769	9 168	4 272	3 097	1 944	3 147	3 360	726
1976 3rd quarter	6 498	2 340	1 061	797	490	786	836	182
4th quarter	7 225	2 627	1 246	837	481	912	909	186
1977 1st quarter r	7 588	2 770	1 299	893	541	999	890	201
2nd quarter r	8 332	3 055	1 453	953	516	1 063	1 013	242
1977 June r	2 886	1 065	500	347	166	364	343	76
July r	2 928	1 000	595	327	178	364	368	89
August p	2 785	1 041	416	330	179	382	372	64
1977 March-May	7 976	2 935	1 335	939	520	1 044	966	232
June-August	8 599	3 106	1 512	1 003	523	1 110	1 083	229
Percentage change	+8	+6	+13	+7	+½	+6½	+12	−1½

¶ See note 2. r Revised estimates. p Provisional estimates.

Table 5 Exports: commodity classes¶ Overseas Trade Statistics basis

Seasonally adjusted values — £ million fob

					Manufactures									
						Machinery and transport equipment†								
	Total	Food, beverages and tobacco	Basic materials	Fuels	Total	Total	Machinery†	Road motor vehicles	Other transport equipment*	Chemicals	Metals and miscellaneous metal manufactures	Textiles	Other manufactures	Miscellaneous
1976	25 769	1 692	776	1 255	21 338	10 125	7 060	2 226	839	3 045	2 345	934	4 889	709
1976 3rd quarter	6 498	418	197	334	5 411	2 530	1 753	562	200	783	635	240	1 203	179
4th quarter	7 225	472	232	397	5 910	2 734	1 910	601	246	860	653	267	1 396	183
1977 1st quarter r	7 588	504	251	480	6 169	2 764	1 951	623	203	899	684	287	1 527	218
2nd quarter r	8 332	538	227	542	6 727	3 043	2 071	666	285	953	756	284	1 751	248
1977 June r	2 886	196	77	219	2 294	1 028	711	222	84	330	258	99	570	83
July r	2 928	185	77	183	2 437	1 194	895	228	80	366	241	99	536	61
August p	2 785	195	75	208	2 241	1 079	718	220	129	308	246	96	485	81
1977 March-May	7 976	502	228	492	6 523	2 962	2 010	669	285	933	731	281	1 666	241
June-August	8 599	576	228	610	6 972	3 301	2 323	670	293	1 004	744	294	1 591	225
Percentage change	+8	+15	—	+24	+7	+11	+16	—	+3	+7½	+2	+4½	−4½	−7

* Not seasonally adjusted. ¶ See note 2. r Revised estimates. p Provisional estimates. † Includes North Sea production installations.

of other finished manufactures rose by 5 per cent in value and by 2½ per cent in volume.

Area analysis (see table 9). In the three months ended August, the value of imports from the developed countries rose by 7 per cent compared with the previous three months. Imports from the EEC fell back sharply from the high July level and were up by 2 per cent between the three-month periods. Deliveries from the rest of western Europe increased by 15 per cent, the arrival of North Sea installations in June outweighing a fall in other imports, notably of precious stones. (Excluding North Sea installations, deliveries fell by 3½ per cent). Imports from North America were 16 per cent higher, reflecting, in particular, high deliveries of aircraft in June and July, while imports from the other developed countries were virtually unchanged. Among the developing countries there was a 10 per cent fall in arrivals from oil-exporting coun-

Table 6 Exports: volume indices Overseas Trade Statistics basis

Seasonally adjusted — Indices 1970 = 100

					Manufactures							
						Machinery and transport equipment†						
	Total	Food, beverages and tobacco	Basic materials	Fuels	Total	Total	Machinery†	Road motor vehicles and other transport equipment	Chemicals	Metals and miscellaneous metal manufactures	Textiles	Other manufactures
Weights	1 000	64	34	26	844	410	276	134	97	119	49	169
1976	139.4	156	122	108	140	133	135	130	171	108	124	168
1976 3rd quarter	137.3	152	118	115	139	130	132	124	171	114	126	161
4th quarter	144.6	161	131	122	144	134	134	136	180	111	130	176
1977 1st quarter	144.3	165	138	134	144	129	131	126	176	118	132	184
2nd quarter	155.0	164	122	144	154	139	138	137	185	131	129	204
1977 June	158.7	176	126	168	156	140	143	130	192	135	132	195
July r	161.5	167	128	153	165	156	167	138	208	126	127	199
August p	152.0	176	124	158	151	143	139	148	173	126	122	175
1977 March-May	150.4	158	122	134	151	136	134	141	181	127	129	198
June-August	157.4	173	126	160	157	147	149	139	191	129	127	190
Percentage change	+4½	+9½	+3½	+19	+4½	+7½	+11	−2	+5½	+1½	−1	−4½

p Provisional estimates. r Revised estimates. † Includes North Sea production installations.

Table 7 Exports: unit value indices Overseas Trade Statistics basis

Not seasonally adjusted — Indices 1970 = 100

					Manufactures							
						Machinery and transport equipment						
	Total	Food, beverages and tobacco	Basic materials	Fuels	Total	Total	Machinery	Road motor vehicles and other transport equipment	Chemicals	Metals and miscellaneous metal manufactures	Textiles	Other manufactures
1976	240.1	213	240	553	234	245	250	234	238	228	202	221
1976 3rd quarter	247.4	220	249	553	242	254	258	246	245	233	207	226
4th quarter	261.7	229	262	608	256	269	273	260	259	247	222	239
1977 1st quarter	274.4	238	276	643	268	284	288	275	272	255	235	249
2nd quarter	280.7	252	285	666	274	288	288	288	280	258	244	256
1977 June	282.6	258	283	681	275	289	289	290	279	255	251	260
July r	283.9	264	279	670	277	293	292	294	283	249	254	259
August p	289.3	265	279	688	282	301	299	304	286	250	252	267
1977 March-May	278.7	247	285	658	272	286	288	283	279	259	240	253
June-August	285.3	263	280	680	278	294	294	296	283	251	252	262
Percentage change	+2½	+6½	−1½	+3½	+2	+3	+2	+5	+1½	−3	+5	+3½

p Provisional estimates. r Revised estimates

Table 8 Imports: commodity classes¶ Overseas Trade Statistics basis

Seasonally adjusted values — £ million cif

				Industrial materials				Finished manufactures						
									Machinery and transport equipment†					
	Total	Food, beverages and tobacco	Fuels	Total	Basic materials	Chemicals	Other semi-manufactures	Total	Total	Machinery†	Road motor vehicles	Other transport equipment*	Other	Miscellaneous
1976	31 155	4 983	5 645	11 262	3 218	1 999	6 045	8 853	6 386	4 637	1 398	351	2 467	411
1976 3rd quarter	8 095	1 264	1 492	2 895	855	515	1 525	2 342	1 715	1 255	392	64	627	107
4th quarter	8 727	1 404	1 510	3 230	927	568	1 735	2 541	1 830	1 293	416	95	711	92
1977 1st quarter r	8 959	1 490	1 390	3 376	988	629	1 758	2 666	1 897	1 289	474	124	769	109
2nd quarter r	9 576	1 568	1 349	3 496	864	621	2 011	2 948	2 213	1 605	485	162	735	122
1977 June r	3 410	518	441	1 179	289	217	673	1 224	970	732	159	85	253	44
July r	3 188	524	415	1 228	323	220	685	978	719	468	187	70	259	48
August p	2 845	541	422	971	276	209	486	882	636	438	158	27	246	40
1977 March-May	9 043	1 562	1 356	3 342	881	604	1 857	2 599	1 877	1 309	492	124	726	115
June-August	9 443	1 583	1 278	3 377	888	645	1 844	3 083	2 325	1 638	505	181	758	132
Percentage change	+4½	+1½	−6	+1	+1	+6½	−½	+19	+24	+25	+2½	+46	+5	+15

* Not seasonally adjusted. ¶ See note 2. r Revised estimates. p Provisional estimates. † Includes North Sea production installations.

tries, while imports from the other developing countries rose by 2 per cent. Deliveries from the centrally planned economies rose by 14 per cent, despite a fall in August.

Invisibles (see table 2)

The latest estimate of invisibles relates to the second quarter of 1977 when credits on services and other transactions were £3,850 million and debits £3,358 million, giving a surplus of £492 million for the quarter. The rate at which the surplus is projected to be running currently has been revised downwards to £175 million a month (see note 15).

Notes

1 Trade figures on a balance of payments basis. The seasonally adjusted import and export figures on a balance of payments basis are obtained by making various adjustments to the seasonally adjusted figures derived from those recorded in the monthly *Overseas Trade Statistics*. These adjustments are summarised in table 13. Some are valuation adjustments; the principal of these is the deduction from the import figure of freight and insurance costs. The other adjustments relate to coverage. Included under this heading are adjustments to bring in items not in the trade statistics (for example on the import side ships built and delivered abroad direct to UK owners) and to remove items which are in the trade statistics (mainly returned goods and goods for processing and repair), where no change of ownership is involved. In addition adjustments are made from time to time to the level of exports to take account of variations in the quality of recording as revealed by the regular monitoring of the accuracy of the export figures (as described in an article in *Trade and Industry*, 15 February 1973). All these adjustments are described in greater detail in the annual *'Pink Book' United Kingdom Balance of Payments 1966-76* (table 2.1 and pp. 14-17) and in an article in the issue of *Trade and Industry* dated 4 November 1970.

Since firm figures for the adjustments do not become available as quickly as the recorded trade statistics, the figures for imports and exports on a balance of payments basis in the latest months are at this stage preliminary estimates and liable to revision.

2 The adjustments described at note 1 are made only for the monthly totals of exports and imports (table 1) and the monthly figures of trade in petroleum and petroleum products (table 12). They are not estimated for the area and other commodity analyses of

Table 9 Imports: areas¶ Overseas Trade Statistics basis

Seasonally adjusted values — £ million cif

	Total	Developed countries				Developing countries		Centrally planned economies
		EEC	Rest of W. Europe	North America	Other	Oil-exporting countries	Other	
1976	31 155	11 385	4 577	4 217	2 116	4 207	3 511	1 109
1976 3rd quarter	8 095	2 825	1 229	1 122	576	1 178	911	268
4th quarter	8 727	3 242	1 281	1 191	616	1 134	968	276
1977 1st quarter r	8 959	3 343	1 288	1 270	636	1 027	1 123	325
2nd quarter r	9 576	3 501	1 648	1 294	713	974	1 060	333
1977 June r	3 410	1 137	724	491	240	328	349	121
July r	3 188	1 245	413	474	236	303	403	128
August p	2 845	1 162	360	416	194	275	341	104
1977 March-May	9 043	3 468	1 306	1 194	673	1 012	1 071	311
June-August	9 443	3 544	1 497	1 381	671	907	1 094	353
Percentage change	+4½	+2	+15	+16	—	−10	+2	+14

¶ See note 2. p Provisional estimates. r Revised estimates.

Table 10 Imports: volume indices Overseas Trade Statistics basis

Seasonally adjusted — Indices 1970 = 100

	Total	Food, beverages and tobacco	Fuels	Industrial materials				Finished manufactures				
				Total	Basic materials	Chemicals	Other semi-manufactures	Total	Machinery and transport equipment†			Other
									Total	Machinery†	Road motor vehicles and other transport equipment	
Weights	1 000	227	105	427	151	60	216	229	166	133	33	63
1976	133.5	101	87	127	93	150	145	196	197	186	241	193
1976 3rd quarter	135.8	103	88	127	95	153	142	202	206	194	251	193
4th quarter	137.8	104	85	132	94	157	151	206	210	196	247	197
1977 1st quarter	139.6	107	76	135	97	170	152	213	213	194	283	215
2nd quarter	145.2	107	73	135	84	166	162	226	234	219	320	203
1977 June	153.3	103	73	137	85	169	164	267	288	267	385	211
July r	146.0	100	71	143	93	173	169	225	233	205	363	204
August p	130.4	107	73	115	80	172	124	210	214	198	254	201
1977 March-May	138.6	108	73	130	86	164	152	205	207	194	291	200
June-August	143.2	103	72	131	86	171	152	234	245	223	334	205
Percentage change	+3½	−4½	−½	+1	—	+4½	—	+14	+18	+15	+15	+2½

p Provisional estimates. r Revised estimates. † Includes North Sea production installations.

Table 11 Imports: unit value indices Overseas Trade Statistics basis

Not seasonally adjusted — Indices 1970 = 100

	Total	Food, beverages and tobacco	Fuels	Industrial materials				Finished manufactures				
				Total	Basic materials	Chemicals	Other semi-manufactures	Total	Machinery and transport equipment			Other
									Total	Machinery	Road motor vehicles and other transport equipment	
1976	288.6	247	704	239	260	267	217	237	232	227	253	249
1976 3rd quarter	296.4	246	728	247	266	274	226	246	242	237	262	258
4th quarter	318.9	268	768	268	295	296	240	265	258	251	287	284
1977 1st quarter	327.6	280	790	277	310	302	248	264	258	248	297	280
2nd quarter	336.8	297	801	284	313	304	258	269	262	252	302	286
1977 June	338.6	304	799	283	314	305	256	272	267	258	302	285
July r	341.4	313	802	284	317	300	257	272	266	255	309	289
August p	338.1	310	796	282	316	298	253	268	262	249	312	286
1977 March-May	334.6	290	803	283	313	304	256	267	260	249	303	286
June-August	339.4	309	799	283	316	301	255	271	265	254	308	287
Percentage change	+1½	+6½	−½	—	+1	−1	−½	+1½	+2	+2	+1½	+½

p Provisional estimates. r Revised estimates.

trade. The values of total trade and the main components of exports and imports in tables 4 to 11 are available only on the overseas trade statistics basis. Whereas comment on total trade and trade in petroleum and petroleum products relates to figures for exports and imports on a balance of payments basis, analyses of the area and other commodity patterns of trade are based on the figures on the overseas trade statistics basis in tables 4 to 11. The main components of trade are seasonally adjusted independently from the totals and in consequence do not always add exactly to the seasonally adjusted totals.

3 Visible balance. The visible balance is the difference between the import and export figures on a balance of payments basis obtained as described in note 1 above. Since, as noted above, the import and export figures for the most recent months are provisional, it follows that the monthly visible balances for these months are also provisional and liable to revision.

The monthly figures for the visible balance are published only on a seasonally adjusted basis. Since the balance is the difference of two large and variable figures, it is itself liable to fluctuation and undue significance should not be attached to a single month's figure; it is more useful to consider the total balance over three or more months.

4 Trends. Even after allowing for seasonal influences, the sequence of monthly figures is usually too variable to give a satisfactory indication of the underlying trend. While it is possible to construct elaborate estimates of trend these cannot be applied to the most recent months, and a simple method of giving some guidance on underlying movements in the most recent past is to take the sum of three months. Apart from occasions when major disturbances distort the flows of trade, the three-monthly total gives a quite good short-term guide and has the merit of simplicity.

5 Timing. The figures for exports relate to documents received in the Statistical Office of HM Customs and Excise up to a few days before the end of the calendar month. On average export documents arrive at Customs Statistical Office within a fortnight of the shipment of goods, so that the documents relate to goods passing through the ports in the month ending about the middle of the calendar month to which they are attributed. The figures for imports relate to documents received at the Customs Statistical Office up to the third working day after the end of the month. Importers are usually required to present their documents before they can obtain customs clearance and remove the goods. Thus the import statistics correspond closely to

Table 12 Trade in petroleum and petroleum products¶
Balance of payments basis (division 33 of SITC(R))

Seasonally adjusted

	Balance of visible trade	Imports					Exports		
		Total	Crude oil			Rest of Division 33	Total	Crude oil ø	Rest of Division 33
	£ million fob	£ million fob	£ million fob	Million tons	Average value ton £ fob	£ million fob	£ million fob	£ million fob	£ million fob
1975	−3 106	3 827	3 069	85.6	35.9	758	721	30	691
1976	−3 960	5 121	4 089	85.6	47.8	1 032	1 161	177	984
1975 1st qtr	−774	948	758	22.2	34.3	190	174	7	167
2nd qtr	−683	841	697	20.7	33.8	144	158	1	157
3rd qtr	−784	976	800	22.4	35.6	176	192	6	186
4th qtr	−865	1 062	814	20.3	40.2	248	197	16	181
1976 1st qtr	−960	1 178	928	21.4	43.4	250	218	18	200
2nd qtr	−957	1 217	955	20.5	46.5	262	260	24	236
3rd qtr	−1 041	1 354	1 079	21.8	49.6	275	313	45	268
4th qtr	−1 002	1 372	1 127	21.9	51.9	245	370	90	280
1977 1st qtr	−816	1 268	1 011	18.8	53.8	257	452	163	289
2nd qtr r	−725	1 236	973	17.6	55.2	263	511	239	272
1977 March	−252	411	336	6.1	55.2	75	159	70	89
April r	−230	388	301	5.5	55.1	87	158	76	82
May r	−298	445	356	6.4	55.3	89	147	54	93
June r	−197	403	316	5.7	55.2	87	206	109	97
July r	−198	373	284	5.2	54.9	89	175	77	98
August p	−192	385	283	5.2	54.6	102	193	112	81
1977 March-May	−780	1 244	993	18.0	55.2	251	464	200	264
June-August	−586	1 161	883	16.1	54.9	278	575	299	276
Percentage change		−6½	−11	−11	−½	+11	+24	+49	+4½

p Provisional estimates. r Revised estimates. ¶ See note 7. ø Not seasonally adjusted.

Table 13 Derivation of the visible trade figures Balance of payments basis

£ million

	Exports				Imports				
	Recorded	Seasonally adjusted†			Recorded	Seasonally adjusted†			
	Overseas Trade Statistics basis (fob)	Overseas Trade Statistics basis (fob)	Valuation and Coverage adjustments	Balance of payments basis (fob)	Overseas Trade Statistics basis (cif)	Overseas Trade Statistics basis (cif)	Adjustments to BOP basis: Valuation adjustments	Adjustments to BOP basis: Coverage adjustments	Balance of payments basis (fob)
1975 r	19 922	19 922	−461	19 461	24 128	24 128	−1 490	+26	22 664
1976 r	25 769	25 769	−353	25 416	31 155	31 155	−1 881	−287	28 987
1975 1st quarter r	4 593	4 748	−84	4 664	5 883	5 950	−354	+12	5 608
2nd quarter r	4 942	4 722	−90	4 632	5 832	5 573	−353	+69	5 289
3rd quarter r	4 796	4 962	−134	4 828	5 998	6 190	−389	+1	5 802
4th quarter r	5 591	5 490	−153	5 337	6 415	6 415	−394	−56	5 965
1976 1st quarter r	5 816	5 738	−96	5 642	6 808	6 669	−407	−82	6 180
2nd quarter r	6 391	6 308	−66	6 242	7 762	7 664	−468	−47	7 149
3rd quarter r	6 258	6 498	−69	6 429	7 783	8 095	−501	−21	7 573
4th quarter r	7 304	7 225	−122	7 103	8 795	8 727	−505	−137	8 085
1977 1st quarter r	7 701	7 588	−148	7 440	9 094	8 959	−534	−23	8 402
2nd quarter r	8 387	8 332	−296	8 036	9 672	9 576	−551	−293	8 732
1977 March r	2 948	2 530	−26	2 504	3 339	2 876	−175	+46	2 747
April r	2 580	2 739	−90	2 649	2 938	3 021	−172	−66	2 783
May r	2 962	2 707	−95	2 612	3 318	3 145	−189	−79	2 877
June r	2 845	2 886	−111	2 775	3 416	3 410	−190	−148	3 072
July r	2 870	2 928	−187	2 741	3 080	3 188	−195	−22	2 971
August p	2 661	2 785	−12	2 773	2 726	2 845	−181	−32	2 632
1977 March-May	8 490	7 976	−211	7 765	9 595	9 043	−536	−100	8 407
June-August	8 376	8 598	−309	8 289	9 222	9 443	−566	−201	8 675
Percentage change	−1½	+8		+7	−4	+4½			+3

† Components and totals are rounded independently. p Provisional estimates. r Revised estimates.

movements through the ports during the calendar month to which they are attributed.

6 Invisibles (services and other current transactions) covers the following items. Government services and transfer payments; all other services including sea and air transport, travel and insurance, banking and other financial transactions; overseas income in the form of interest, profits and dividends; and private transfers. The monthly figures are inevitably less precise than those for visible trade for several reasons; the data are not available on a monthly basis (some are reported quarterly, others less frequently) and the figures are, therefore, essentially projections based on past trends; revisions, affecting particularly gross credits and debits, but often the balance as well, are more frequent; and the gross figures themselves include a number of items which are appropriately recorded as the net profit or surplus arising on the transactions.

7 Trade in petroleum and petroleum products. Trade in petroleum and petroleum products (table 12) accounts for almost all the trade in fuels, section 3 of SITC(R) which is included in tables 5 and 8. Import and export figures are shown for crude oil and for the rest of the division which includes petroleum partly refined for further refining and petroleum products (eg motor spirit, lamp oil and white spirit, distillate fuels, residual fuel oils, lubricating oils and greases, etc).

The figures of value and tonnage of crude oil imports in table 12 are based on reports to HM Customs and Excise and have been seasonally adjusted with the same seasonal and length of month factors as have been used for the fuels total in table 8. These figures cannot be directly compared with the monthly import tonnages originating from the Department of Energy which are published in the *Monthly Digest of Statistics* and the *Digest of Energy Statistics*, as the latter are based on reports received directly from the oil industry and are unadjusted. Over longer periods the differences between the two sources are largely resolved.

For imports, the average value of crude oil per ton has been obtained by dividing the value of crude oil imports by the tonnage and will reflect not only changes in price but also changes in the commodity mix of imports due for example, to differing qualities of crude oil.

The figures of the value of crude oil exports are now given without seasonal adjustment. In previous months they were presented on a seasonally adjusted basis, using the same seasonal and length of month factors as have been used for the fuels total. Further consideration has shown however that these factors may not be wholly appropriate. The export figures include oil which has been re-exported.

8 Unit value and volume indices. A brief description of the way in which the index numbers on a balance of payments basis are calculated was published in the article giving unit value and volume index numbers for March 1971 in *Trade and Industry* of 26 May 1971. An article was published in *Trade and Industry* on 11 October 1973 introducing the series of import and export unit value and volume indices with 1970 = 100. The purpose of the index numbers is to measure the changes in price and volume of our imports and exports. Index numbers can be constructed in various ways, and the series used here are of the fixed base type. Thus, the unit value indices measure changes in 'price' of a fixed selection of trade headings (although in practice it is not specific prices which are measured but the average price of all the varying transactions taking place each month in the selected headings, reflecting different kinds of goods covered by each heading and different markets or sources of supply).

Correspondingly, the volume indices measure, for the same selection of trade headings, what the change in the value of trade would be assuming no changes in the prices charged from those in the base year. Because the indices are base weighted, they do not take account of the changes in the pattern of trade since the base year, and consequently their product does not precisely account for the change in the value of trade expressed as an index. In practice, though, since the composition of trade changes little between consecutive months, the product of the changes in the indices will often approximate to the change in the value of trade between one month and the next. A full methodological article about the 1970-based series of indices was published in the April 1975 issue of *Economic Trends*. Adjustments have been made to the import volume index to include North Sea oil production installations, however no changes have been made to the base-weighted unit value index.

9 Definition of areas. The areas used in tables 4 and 9 comprise the following countries:

EEC: West Germany, Netherlands, Belgium, Luxembourg, France, Italy, Denmark and Irish Republic.

Rest of western Europe: Finland, Sweden, Norway, Iceland, Switzerland, Liechtenstein, Portugal, Austria, Andorra, Vatican City, Greece, Turkey, Yugoslavia, Spain, Faroe Islands, Gibraltar, Malta, Continental Shelf (foreign part).

North America: USA, Canada, Puerto Rico, Greenland, St Pierre and Miquelon.

Other developed countries: Australia, New Zealand, Japan and South Africa.

Centrally planned economies: Soviet Union, Poland, East Germany, Hungary, Czechoslovakia, Albania, Bulgaria, Romania, China, North Korea, Outer Mongolia and Vietnam.

Oil-exporting countries: Abu Dhabi, Algeria, Bahrain, Brunei, Dubai, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Oman, Qatar, Saudi Arabia, Sharjah etc, Trinidad and Tobago and Venezuela.

Other developing countries: All other countries.

10 Seasonally adjusted import figures for December and January. Because of difficulties of allowing fully in the seasonal adjustment procedure for the effects of the 1976/77 Christmas/new year holiday period, the seasonally adjusted imports figures for December are probably understated and those for January correspondingly overstated. Exports are probably little affected.

11 Treatment of oil platforms in July export figures. The July exports figures on an overseas trade statistics basis include two oil platforms, valued at around £150 million, which have been moved to Norway for completion, and which should be returning to the UK continental shelf next year. For a number of reasons, principally that no effective change of ownership has taken place, they have been excluded from the July figures on a balance of payments basis. When the platforms return to the UK only the additional value added to them will be included in the balance of payments figures; the £150 million will be netted out.

12 Parcel post. The value of exports and imports by parcel post in the overseas trade statistics is calculated by applying estimates of the average value of parcels to the total numbers leaving or arriving in the country. The estimates of average value are derived from occasional sample surveys and are extrapolated by appropriate unit value indices. Results from the latest such survey, carried out in 1976, suggest that the extrapolation has underestimated the average value, particularly of exports. The figures for exports have been revised upwards by £140 million in 1976; those for the most recent months and for years back to 1974 have also been revised.

13 The green pound. The green money system of the EEC's common agricultural policy involves the payment or receipt of monetary compensatory amounts (mca's) on international trade in most agricultural products. The level of the mca's depends on the extent to which a member country's exchange rate has moved away from the so-called 'green' rate of exchange in which the community's intervention prices are set. Because sterling is now trading at a rate below its green rate, mca's generally take the form of subsidies on imports and levies on exports. Prior to May 1976, mca's on imports from EEC countries were collected by the importer from the Intervention Board for Agricultural Produce in the United Kingdom, and are included accordingly in receipts of government transfers. Since May 1976, mca's on imports from EEC countries (other than Italy) have been paid directly to the exporter in his own country, and so are excluded from receipts of government transfers in the balance of payments account for the United Kingdom. This change has meant however that the basis of valuation of these imports up to May 1976 differs from that used subsequently.

Investigation has shown that the mca's on imports from other EEC countries have not always been treated appropriately in the valuation of imports in the overseas trade statistics. Hence, valuation adjustments have been made to ensure that, as far as possible, imports from other EEC countries are valued before deduction of the mca's payable in the United Kingdom before May 1976 and after deduction of the mca from that date.

The adjustments also cover mca's payable to the supplier of imports of dairy products from New Zealand, and on sugar from African, Caribbean and Pacific countries. Other imports from third countries are

believed to be valued entirely before deduction of mca's and exports before addition of mca's. In May 1977 importers were notified of the appropriate method of valuation and no adjustment should be necessary after the second quarter of 1977.

14 Treatment of North Sea transactions. The figures of exports for both July and August include a positive balance of payments adjustment to allow for the reimbursement by Norway of a proportion of the expenditure on development of the Frigg North Sea gas field. For national accounts and balance of payments purposes the adjustment is being treated as a sale of fixed assets to Norway. The amount of the adjustment to the third quarter figures is estimated to be £60 million. To minimise the distortion to the trade figures it is being spread over all three months of the quarter.

15 Revisions. Figures on a balance of payments basis up to and including 1976 have been revised since the press notice on the July figures. They are consistent with those published on Tuesday, 6 September in the *Pink Book, United Kingdom Balance of Payments 1966-76*. The main changes to visible trade have been described above (notes 12 and 13). For 1977 the main changes to the current balance result from the compilation of the estimates of invisibles for the second quarter, which are now used instead of the projection in last month's press notice, and revisions to the estimates for the first quarter. The latest estimates of invisibles were released by the Central Statistical Office on Thursday, 8 September in the press notice on the balance of payments accounts for the second quarter of 1977. Compared with the press notice on the July trade figures the deficit on the current account has been increased by £48 million a month over the first half of 1977.

Overseas Trade Statistics
Detailed particulars of United Kingdom imports and exports for August with cumulative totals will be published on 27 September[1] and further analysis of the figures will be found in tables 14.1 to 14.19 in the *Monthly Digest* for September[2], due to be published in the second week of October.

Inquiries: 01-215 3131 (value data), 01-215 3466 (indices).

[1] *Overseas Trade Statistics of the United Kingdom*, published by HMSO, price £6.50 (Annual Subscription £93.60).
[2] *Monthly Digest of Statistics*, published by HMSO, price £1.95 (Annual Subscription including Supplement of Definitions and postage £27.86).

Wholesale price indices in August

Output prices
The provisional price index for the home sales of manufactured products increased by ¾ per cent in August to 268.0 (1970 = 100).

The index for manufactured products other than food, drink and tobacco was 1¼ per cent higher, with higher prices for vehicles making the most significant contribution. This index rose 3 per cent in the latest three months compared with 4 per cent in the previous three months, and apart from November 1975, this is the smallest increase in this index over a three-month period since August 1973.

Higher prices for motor cars and commercial vehicles were mainly responsible for the 3½ per cent increase in the vehicles industry index. They also accounted for over a half of the 1¾ per cent rise in the index for engineering and allied industries.

The main contributors to the 1½ per cent increase in the index for the steel industries were tinplate, forgings, and the carry-over effect of the July price rises for steel tubes and heavy bars and sections.

All the other sector indices rose by 1 per cent or less except that for mechanical engineering which rose by 1¼ per cent.

There was a slight fall in the provisional index for the output of the food manufacturing industries, the first fall in this index since April 1974. Lower prices for tea and for certain animal and poultry foods more than offset higher prices in the rest of the sector.

The change in the index or all manufactured products measured over a 12-month period fell, for the first time since December 1976, from 21 per cent in July to 20 per cent in August.

More about wholesale price indices

01-215 3544	tables 1 and 2
01-215 3549	engineering
01-215 5216	chemicals, steel, building materials, etc
01-215 3548	textiles, clothing, timber, paper, etc
01-215 3173	imported commodities

Correspondence: Departments of Industry, Trade and Prices and Consumer Protection, Economics and Statistics Division 4, Room 249, Sanctuary Buildings, Great Smith Street, London SW1P 3DB

Notes on wholesale price indices

1 Detailed notes on index numbers of wholesale prices were last shown in *Trade and Industry*, 13 May 1977.

2 The index numbers are constructed on a net sector basis. This is to say, the price movements used to compile the index for a particular sector of industry are only those relating to transactions between the sector and other sectors. Transactions between undertakings in the same sector are excluded. Thus index numbers for the whole of manufacturing industry are not weighted averages of sector index numbers.

3 All the index numbers are compiled exclusive of value added tax and (before its abolition) of purchase tax. Revenue duties (on cigarettes and manufactured tobacco, alcoholic liquor, matches and mechanical lighters) are included. The duty on hydrocarbon oils is excluded from output price series that cover these products (unless specifically noted to the contrary) but is included in series for materials and fuel purchased by sectors of industry.

4 Firm and provisional indices, at all levels of aggregation, include imputation for items for which there is no current price information. Additional provisional figures will be published for those indices where there are insufficient returns to allow accurate imputation.

5 Revisions to firm index numbers will only be made if they are significant. These revisions will be notified when the series are next published.

6 A list of commodities produced in the United Kingdom supplementary to those shown in table 3a is published in table 4a in April, August and December. Similarly a list of commodities wholly or mainly imported into the United Kingdom supplementary to those shown in table 3b is published in table 4b.

Input prices
The provisional price index for materials and fuel purchased by manufacturing industry fell by 1½ per cent in August to 340.0.

Lower prices for many imported materials, particularly crude oil and copper, were responsible for a 1 per cent fall in the index for materials purchased by manufacturing industry other than the food, drink and tobacco industries. For many commodities this was the result of the appreciation of sterling against major foreign currencies between July and August. During the past three months this index fell 1¼ per cent.

Lower prices in August for wool and cotton (the latter having fallen nearly 25 per cent since April) were mainly responsible for the 1½ per cent fall in the index of materials and fuel purchased by the textile industries.

The index for the non-ferrous metals section fell by 1¼ per cent, with price deductions for copper, copper scrap, brass ingots and lead partially offset by higher tin prices. This index has fallen by 3¾ per cent in the last three months.

Lower prices for imported woodpulp were responsible for the ¾ per cent fall in August in

the paper industries index; these were entirely the result of the appreciation of sterling.

The index of materials and fuel purchased by the electrical engineering industries was unchanged. Lower prices for copper and copper wire offset higher prices for a number of commodities, especially plastic goods.

The ¾ per cent increase in the metal goods index resulted mainly from higher prices for tinplate, whilst higher prices for forgings made the most significant contribution to the ¾ per cent rise in the mechanical engineering industries index.

Lower prices for tea were mainly responsible for the 3 per cent fall in the index for materials purchased by the food manufacturing industries. There were also lower prices for other imported materials, particularly cocoa beans, oils and oilseeds, but these were offset by higher coffee prices. A number of home-produced food materials also fell in price, notably cereals and potatoes. During the past three months this index fell by 5½ per cent.

Table 1 Price index numbers of materials purchased

1970 = 100

1968 SIC		1976			1977		1976	1977							
		2nd qtr	3rd qtr	4th qtr	1st qtr	2nd qtr	Aug	Jan	Feb	Mar	Apr	May	Jun	Jul p	Aug p
Orders III to XIX	Materials and fuel purchased by manufacturing industry:	292.6	306.8	329.9	341.5	347.7	304.0	337.8	339.5	347.2	349.7	348.3	345.2	344.9	340.0
	Materials[1]	299.2	314.6	339.7	351.6	356.1	311.5	347.9	349.7	357.3	358.7	356.7	353.0	352.4	347.0
	Coal (except for carbonising), gas and electricity	230.6	232.0	236.3	244.8	267.8	232.0	241.0	242.6	250.7	264.3	267.9	271.1	272.9	273.0
Orders IV to XIX	Materials and fuel purchased by manufacturing industry, other than food, drink and tobacco manufacturing industries	313.5	328.3	348.4	355.8	359.0	325.9	353.4	354.7	359.4	359.7	360.2	357.2	359.6	356.4
	Materials[1]	325.3	342.0	364.3	371.6	372.0	339.3	369.4	370.6	374.9	373.3	373.3	369.4	371.9	368.3
Order III	Materials and fuel purchased by the food, drink and tobacco manufacturing industries	246.8	257.3	283.1	303.0	320.1	255.0	297.4	299.9	311.6	321.9	320.0	318.3	314.0	307.7
	Materials and fuels purchased by selected broad sectors of industry:														
211 to 229	Food manufacturing industries	246.5	258.2	288.7	309.4	322.9	253.9	302.3	305.6	320.2	327.6	322.0	319.1	314.2	305.0
	Materials	246.5	258.3	289.5	310.3	323.4	253.8	303.1	306.5	321.4	328.5	322.4	319.4	314.2	304.7
	Fuel[2]	248.0	254.0	268.0	283.7	309.1	255.1	281.3	282.2	287.7	303.9	310.9	312.4	313.3	311.9
211 to 229 (excluding MLH 219)	Food manufacturing industries (excluding animal and poultry foods)	243.3	254.3	284.9	307.1	321.2	250.2	299.1	302.8	319.4	326.1	319.7	317.7	313.8	304.9
Order V	Chemicals and allied industries	276.5	289.8	310.3	319.3	330.4	288.2	316.6	317.8	323.6	329.4	332.5	329.4	328.6	326.6
311 and 312	Steel industries	281.6	291.3	299.5	303.7	319.7 p	292.4	301.5	303.3	306.3	319.0	319.8	320.3 p	320.8	322.5
321 to 323	Non-ferrous metals industry	189.3	202.0	205.4	222.3	220.0	200.2	215.5	222.2	229.3	222.2	222.0	215.9	216.3	213.7
Order VII (excluding MLH 342)	Mechanical engineering industries	245.1	260.6	274.9	283.7	289.1	260.9	281.8	283.6	285.7	288.0	289.5	289.8	292.6	295.0
Order IX	Electrical engineering industries	218.5	231.4	238.1	249.2	252.3	231.4	245.1	249.3	253.3	253.1	253.1	250.8	251.5	251.4
Order X	Shipbuilding and marine engineering industries	238.5	253.0	266.2	275.9	281.7	253.7	273.6	276.0	278.2	280.4	282.0	282.6	284.7	285.5
Order XII	Metal goods industries	258.3	272.3	291.4	298.2	302.6	272.0	294.2	297.6	302.8	303.3	303.5	301.1	303.4	305.6
Order XIII	Textile industries	255.9	275.1	298.8	298.6	297.1	273.5	298.6	299.3	297.8	298.7	298.1	294.5	294.0	289.8
Order XV	Clothing and footwear industries	209.1	219.1	231.0	240.9	246.9	218.1	239.0	241.3	242.5	246.1	247.3	247.3	249.1	250.0
461, 464 and 469	Bricks, cement etc, industries	259.0	271.1	282.4	298.3	313.8	271.8	294.1	297.3	303.5	308.9	314.2	318.4	320.2	321.7
462 and 463	Pottery and glass industries	248.5	259.6	274.6	289.4	306.3	259.8	285.9	288.6	293.7	301.6	306.0	311.2	314.7	315.8
Order VXII	Timber	259.7	285.9	307.0	319.9	327.4	287.3	317.6	319.7	322.3	325.8	327.5	328.9	330.1	330.8
481 to 484	Paper industries	273.7	286.0	304.7	312.5	317.6	284.2	310.9	312.1	314.6	316.7	317.9	318.3	318.2	316.0
Order XX	Construction materials	242.5	258.2	271.5	284.0	294.0	259.3	279.5	284.8	287.7	290.3	294.3	297.3	300.2	302.3
Part of Order XX	House building materials	244.7	261.6	276.3	288.6	299.8	262.7	283.5	289.6	292.6	295.5	300.3	303.7	306.7	309.6

[1] Includes crude oil and coal for carbonising. [2] Includes petroleum products.

Table 1a Price index numbers of materials and fuel purchased by selected sectors of industry

1970 = 100

1960 SIC		1976			1977		1976	1977							
		2nd qtr	3rd qtr	4th qtr	1st qtr	2nd qtr	Aug	Jan	Feb	Mar	Apr	May	Jun	Jul p	Aug p
361	Electrical machinery industry	230.9	245.2	256.2	264.2	268.3	245.6	261.9	264.1	266.7	267.9	268.7	268.3	270.3	271.5
362	Insulated wires and cables industry	179.3	191.4	187.0	198.6	197.7	191.5	193.5	198.4	203.9	201.0	198.1	193.9	192.1	189.4
364	Radio and electronic components industry	224.6	237.1	248.4	259.5	266.7	237.3	255.9	259.4	263.2	265.7	267.1	267.3	269.6	270.7
368	Domestic appliances industry	222.3	234.4	246.3	255.0	260.2	234.4	252.4	254.4	257.2	259.1	260.6	260.8	263.1	264.1
369	Electrical goods industries n.e.s.	219.6	231.6	240.9	254.2	259.0	231.3	249.1	254.3	259.2	259.2	260.5	257.4	259.0	259.2
381	Motor vehicle industry	247.4	261.7	276.3	285.2	291.0	261.8	282.9	285.4	287.3	289.6	291.1	292.4	295.3	298.0
411	Man-made fibres industry	248.1	259.0	275.8	277.8	284.6	258.1	276.3	277.5	279.6	282.7	285.2	286.0	287.8	286.2
414	Woollen and worsted industry	282.9	302.2	338.4	333.3	315.9	299.7	340.4	336.2	323.2	318.4	315.4	313.9	312.5	309.9
422/1	Household textiles and handkerchiefs industry	224.2	243.3	257.5	269.3	277.5	242.3	265.4	268.6	274.0	276.2	278.3	278.0	277.5	278.3
450	Footwear industry	214.7	222.9	231.6	239.3	245.6	222.0	236.2	240.2	241.6	244.7	245.9	246.2	247.3	248.8
481	Paper and board making industry	288.5	299.3	318.4	318.1	325.1	297.7	314.9	318.0	321.5	324.2	325.4	325.6	324.5	321.4

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Table 2 Price index numbers of output (home sales)

1970 = 100

1968 SIC		1976			1977		1976	1977							
		2nd qtr	3rd qtr	4th qtr	1st qtr	2nd qtr	Aug	Jan	Feb	Mar	Apr	May	Jun	Jul p	Aug p
Orders III to XIX	Output of manufactured products	214.4	223.2	233.9	248.0	259.2	223.4	244.9	248.2	250.8	255.4	259.8	262.4	265.7	268.0
Orders IV to XIX	Products of manufacturing industry other than food, drink and tobacco manufacturing industries	222.0	230.8	241.2	254.5	264.4	231.4	251.0	254.9	257.6	261.1	265.2	267.0	270.2	273.4
	Output of selected broad sectors of industry														
211 to 229	Food manufacturing industries	222.2	233.8	252.2	267.3	282.9	232.8	263.9	267.1	270.9	276.4	283.5	288.9	295.1	294.7
211 to 229 (excluding MLH 219)	Food manufacturing industries (excluding animal and poultry foods)	220.5	230.2	247.3	262.5	279.1	228.9	259.3	262.2	266.1	272.0	279.9	285.5	292.9	293.8
Order V	Chemicals and allied industries	213.7	221.0	228.8	239.7	248.5	221.3	237.8	239.5	241.7	246.0	248.5	251.0	255.0	256.5
Order VI	Metal manufacturing	240.6	259.1	271.8	283.8	286.4	259.6	280.5	283.8	287.2	286.9	286.7	285.7	288.8	291.4
311 and 312	Steel industries	260.3	281.8	300.2	311.0	313.1	283.3	309.5	310.8	312.7	313.1	313.0	313.3	316.7	321.1
Orders VII to XII	Engineering and allied industries	217.7	226.6	236.3	248.1	258.3	227.1	244.1	248.4	251.7	254.6	259.4	260.9	264.0	268.7
Order VII (excluding MLH 342)	Mechanical engineering	226.1	235.4	244.5	255.7	264.3	235.1	252.6	255.5	259.0	262.2	264.4	266.4	270.2	273.5
Order VIII	Instrument engineering	190.9	196.7	203.7	211.6	217.3	197.0	210.1	211.7	213.1	215.6	218.1	218.3	220.9	222.9
Order IX	Electrical engineering	199.1	205.8	214.1	223.1	232.6 p	205.5	220.1	222.7	226.4	230.2	233.3	234.2 p	236.4	238.7
Order XI (excluding MLH 383)	Vehicles	236.8	247.6	260.0	277.1	293.5	249.4	268.9	279.9	282.6	285.1	297.0	298.3	300.7	311.6
Order XII	Metal goods industries n.e.s.	227.1	238.3	253.6	263.5	272.1	238.4	261.2	263.6	265.8	270.8	271.9	273.6	276.8	278.5
Order XIII	Textile industries	201.1	209.6	219.9	234.9	241.6	209.3	232.4	235.2	237.1	240.3	241.8	242.7	244.2	245.1
Order XV	Clothing and footwear	180.3	186.4	193.7	202.4	206.6	185.8	201.5	202.3	203.4	204.8	206.6	208.4	211.2	212.4
441 to 445 and 449	Made-up clothing	175.9	180.2	188.5	195.5	198.4	179.3	195.1	195.5	196.0	197.1	198.1	200.1	202.0	203.2
461, 464 and 469	Bricks, cement, etc, industries	243.1	254.3	265.6	279.8	294.7	255.0	273.4	280.6	285.5	288.3	293.8	301.9	307.2	310.5
462 and 463	Pottery and glass industries	223.2	230.2	241.5	251.4	266.2	230.5	247.2	251.2	255.9	263.3	267.0	268.4	269.1	271.3
Order XVII	Timber industries	225.5	235.7	248.5	266.6	275.7	236.5	261.7	266.9	271.1	273.3	275.8	278.1	279.2	280.7
481 to 484	Paper industries	242.4	254.6	266.0	278.5	284.4	254.1	277.7	278.5	279.4	281.9	285.2	286.2	288.2	289.5
Order XX	New construction[3]	246	264	281	290	298 p			290			298 p			

[3] Index of building costs relate to average for the quarter (*Department of Environment*).

Table 3a Commodities produced in the United Kingdom (published monthly)

1970 = 100

1968 SIC		1976	1977			
		Aug	May	Jun	Jul p	Aug p
Mining and quarrying						
101	Coal	350.3	402.7	402.5	402.5	402.5
102	Stone and slate quarrying and mining	272.1	314.8	316.2	317.3	317.9
102/1	Granite and limestone roadstone	257.8	294.1	295.6	298.6	299.5
	Coated limestone roadstone	321.5	375.4	377.4	378.1	378.1
	Granite and other chippings	238.7	264.1	264.7	264.9	272.1
103	Chalk, clay, sand and gravel extraction					
	Sand and gravel – ex pit or works	241.9	297.1	310.6	310.6	313.4
	Sand and gravel – delivered	196.7	243.7	248.0	249.0	249.0
Food, drink and tobacco						
240	Tobacco	168.9	208.8	213.8	214.3	214.3
Coal and petroleum products						
261	Coke ovens and manufactured fuel					
	Foundry coke	404.2	468.7	468.7	468.7	468.7
262	Mineral oil refining					
	Petroleum products	398 5	497.6	497.6	497.6	497.6
	Motor spirit two star (including duty) ø	209.5	243.3	243.3	243.3	231.1
	Medium fuel oil (950-secs including duty) ø	374.6	505.4	505.4	505.4	505.4
	Derv fuel (including duty) ø	196.9	240.6	240.6	240.6	240.6
263	Lubricating oils and greases	253.2	282.4	295.5	295.9	295.9
Chemicals and allied industries						
271	General chemicals	251.9	285.3	287.8	290.6	291.0
271/1	Inorganic chemicals (including inorganic gases)	242.4	274.0	278.2	282.5	282.9
271/2	Organic chemicals (including organic gases)	278.0	309.0	310.6	311.3	311.5
272	Pharmaceutical chemicals and preparations					
	Pharmaceuticals chemicals	220.2 r	260.5	260.7	261.2	261.4
	Pharmaceutical preparations	198.4	218.1	220.4	224.6	225.0
273	Toilet preparations	192.2	216.7	221.5	227.1	228.4
274	Paint	225.1	257.1	260.2	264.7	264.9
276	Synthetic resins and plastics materials and synthetic rubber					
276/1	Synthetic resins and plastics materials	216.9	242.9	244.5	245.7	246.2
	Polyolefin moulding materials	238.9	247.7	248.1	247.7	248.3
	Polyvinyl chlorides	246.3	280.8	283.0	283.0	283.5
279	Other chemical industries					
279/3	Explosives, fireworks etc	248.7	279.1	279.1	284.0	291.6

1968 SIC		1976	1977			
		Aug	May	Jun	July p	Aug p
Metal manufacture						
311/2	Steel					
	Steel sheets	263.8	286.5	286.5	286.5	286.5
	Electrical steel sheets	269.8	297.0	297.0	297.0	297.0
	Stainless steel sheets	190.6	235.4	235.4	235.5	235.5
	Uncoated steel sheets (other than stainless and electrical)	276.0	295.5	295.5	295.5	295.5
	Galvanised steel sheets	270.7	290.2	290.2	290.2	290.2
	Tinplate	271.9	305.1	308.6	308.6	324.4
	Semi-finished steels	317.4	349.1	349.1	356.5	359.5
	Semi-finished steels for forgings (other than drop forgings)	328.2	364.0	364.0	377.7	382.6
	Semi-finished steels for alloy stainless products (except sheets and tubes)	275.8	303.8	303.8	312.7	316.4
	Semi-finished steels for drop-forgings and stampings	319.5	353.0	353.0	367.8	373.8
	Semi-finished steels for tubes	326.9	360.1	360.1	365.2	367.2
	Semi-finished steel for forgings (other than drop forgings) (using Public Sector indicators)	334.4	361.2	361.2	374.1	379.4
	Finished steels (other than sheets, tinplate, tubes, forgings and castings)	286 4	314.4	314.1	318.2	320.9
	Steel wire rods	285.3	319.9	319.9	320.5	320.7
	Heavy steel rails and fishplates	315.5	347.7	347.7	367.4	375.4
	Steel plates (alloy)	276.4	334.2	334.2	334.2	334.2
	Steel plates (non-alloy)	284.6	303.8	303.8	304.0	304.0
	Steel sheet piling	309.9	341.2	341.2	352.9	357.7
	Heavy steel bars and sections	298.5	333.4	333.4	347.8	353.7
	Light re-rolled bars and sections	297.9	327.8	326.0	326.0	326.1
	Hot rolled steel strip	319.6	357.1	357.1	357.3	357.3
	Bright steel bars (non-alloy)	288.7	315.7	315.7	322.5	334.9
	Cold rolled steel strip (non-alloy)	286.2 r	313.1 r	313.1	313.1	313.1
	Alloy steel bars and rods, black (excluding stainless)	258.6	279.2	279.2	293.3	299.1
	Finished stainless steels	222.2	256.2	256.2	256.2	256.2
	High speed tool and magnet steel	244.4	292.5	297.5	297.5	297.5
	Steel castings	251.4	290.6	292.1	292.9	296.8
	Carbon steel castings	246.0	295.8	297.9	299.1	299.5
	Stainless and heat resisting alloy steel castings	225.3	252.3	252.5	252.6	258.0
	Other alloy steel castings	286.8	314.3	315.6	316.3	326.3

Table 3a continued

1968 SIC		1976 Aug	1977 May	Jun	Jul p	Aug p
	Structural steel	295.7	322.1	322.1	327.7	329.9
	Forgings (other than drop forgings)	352.3	392.5	393.4	393.7	408.2
312	Steel tubes					
	Steel tubes and fittings	312.2 r	337.8	337.9	346.3	355.5
	Steel tubes (other than electric conduit tubes)	315.0 r	340.8	340.8	349.6	359.2
	Non-alloy steel tubes, hot finished	335.5 r	363.1	363.1	375.4	388.5
	Pipe fittings	267.0	285.1	286.8	291.8	297.7
313	Iron castings etc.	293.8	317.1	319.2	327.4	330.9
313/3 and 313/4	Iron castings	283.0	309.8	312.2	317.4	319.8
313/4	Other iron castings					
	Cast and spun iron pipes and fittings	308.4	330.6	331.3	336.4	336.6
321	Aluminium and aluminium alloys					
	Wrought aluminium	226.3 r	275.2	277.6	285.2	285.9
	Aluminium: Rolled	213.5 r	280.6	282.2	289.9	289.9
	Extruded and drawn aluminium products – other than wire	237.6 r	276.2	279.0	287.3	287.3
	Aluminium: Castings	240.5	279.4	283.6	283.6	283.3
	Aluminium: Forgings	213.4	242.6	242.6	254.6	269.3
322	Copper, brass and other copper alloys					
	Copper tubes	173.7	166.9	164.0	163.0	163.0
	Brass ingots	169.0	170.6	166.5	163.1	155.1
	Mechanical engineering					
331	Agricultural machinery	245.2	284.0 p	285.3 p	290.3	297.5
	Soil preparation and cultivating machinery	246.7	282.2	283.2	297.9	299.0 e
	Harvesting, threshing, feed-processing machinery etc.	253.0	291.8 p	293.6 p	296.2	308.7 e
	Pick-up balers	239.8	290.8	290.9	291.2	293.1 e
	Grinding mills and meal mixers	239.2	279.8	279.8	282.2	282.2 e
	Milking machines	232.7	272.7	272.7	273.6	273.6 e
	Other agricultural machinery (spraying machinery, general purpose elevators and conveyors etc)	226.5	272.3	273.1	275.7	275.7 e
332	Metal-working machine tools	256.0	288.6	290.0	299.4	301.7 e
332/1	Metal-cutting machine tools	258.4	291.1	291.2	304.7	307.0 e
332/2	Metal-forming machine tools	253.2	283.2	285.4	288.6	290.1 e
333	Pumps, valves, compressors, fluid power equipment	230.2	255.3 p	256.2 p	258.1	261.8
333/1	Pumps	217.2	246.1	246.7	247.0	245.0
	Kerbside petrol and oil measuring pumps	207.6	223.7	225.8	226.2	226.2 e
	Industrial pumps	217.8	244.8	245.5	247.0	249.2 e
	Centrifugal, turbine and axial flow pumps	221.6	253.4	254.4	256.8	260.0 e
333/2	Industrial valves	257.8	275.4 p	276.0 p	279.7	281.3 e
	Iron valves	261.1	285.5 p	286.2 p	288.4	291.3 e
	Steel valves	268.7	280.4 p	280.6 p	284.0	284.2 e
	Non-ferrous valves	240.9	259.9 p	261.0 p	266.5	266.6 e
333/3	Air and gas compressors	229.6	275.1	276.3	277.2	289.5 e
333/4	Fluid power equipment					
	Oil/hydraulic fluid power equipment	214.8	238.3	240.0	240.6	243.6 e
	Pneumatic fluid power and control equipment	187.6	208.8	208.8	208.8	214.4 e
334	Stationary internal combustion engines and steam turbines	232.5	268.5	273.6	273.6	280.0
336	Construction and earth-moving equipment	239.4	281.6 p	282.0 p	283.5	288.1
	Contractors' plant and parts	238.0	281.4 p	281.8 p	283.2	288.2 e
	Excavators, trenchers, diggers, etc.	252.7	313.9	313.9	318.0	320.1 e
	Concrete mixers	238.0	264.0	264.0	264.0	274.3 e
	Dumpers	237.6	265.6	265.6	265.6	286.2 e
	Crawler tractors	218.6	252.7 p	252.7 p	252.7	255.1 e
	Crushing and screening plant and parts	248.8	275.7	275.7	277.2	277.2 e
337	Mechanical handling equipment	226.8	256.1	258.3	261.9	266.3
337/2	Cranes	227.3	252.1	254.2	257.3	260.0
337/4	Lifting and winding devices	228.7	264.4	266.8	270.4	271.4
337/5	Powered industrial trucks and tractors	239.2	277.3	280.2	282.1	285.6
339/1	Mining machinery	206.1	228.7	230.0 p	230.3	231.1 e
339/3	Commercial and industrial refrigeration machinery	228.4	272.6	273.1	276.4	277.2
339/5	Scales and weighing machinery	242.3	273.1	273.4	274.2	280.7 e
339/6	Portable power tools	218.7	234.1	235.6	241.1	243.9 e
339/7	Food and drink processing machinery	222.7	258.8	262.4	267.3	269.5
339/8	Bottle washing, bottling, packaging, labelling and canning machinery	222.0	255.4	256.2	260.1	260.4
339/9	Miscellaneous machinery	227.4	258.6 p	265.3 p	268.4	270.8
	Instrument engineering					
352	Clocks, watches and time recorders	217.5	240.3	240.3	241.3	243.4
354	Scientific and industrial instruments and systems	197.6	218.0	218.2 p	220.7	222.0 e
354/1	Optical instruments					
	Microscopes	193.9	216.2	216.2	216.2	216.2 e
354/1	Other scientific and industrial instruments					
	Process measuring and control instruments	204.7	225.5	226.0	227.1	227.6 e
	Analytical instruments	186.5	200.5	200.7	210.1	211.0 e
	Spectrophotometers and absorptiometers	156.0	167.2	167.2	174.5	174.5 e
	Electrical testing, measuring and control instruments	189.3	210.8	210.8	212.7	215.8 e
	Electrical engineering					
365	Broadcast receiving and sound reproduction equipment	147.4	165.7	166.7	167.3	170.4 e
365/1	Gramophone records and pre-corded tapes	187.9	197.0	197.0	197.5	215.0 e
	Gramophone records	193.2	203.5	203.5	204.1	221.7 e
	Pre-recorded tapes – cassettes	193.6	199.7	199.7	199.7	218.5 e
	Pre-recorded tapes – cartridges	167.1	170.1	170.1	170.1	189.2 e
365/2	Other broadcast receiving and sound reproduction equipment	142.9	162.2	163.3	163.9	165.5 e
	Domestic television receivers†	144.4	166.1	166.3	166.4	168.1 e
	Domestic television receivers – colour†	131.8	148.9	149.1	149.4	150.9 e
	Domestic television receivers – monochrome†	148.0	171.0	171.2	171.2	173.0 e
	Record players and tape recorders	140.8	154.2	155.0	156.0	157.7 e
368	Domestic electrical appliances	182.5	216.2 p	216.6 p	223.0	224.6
	Domestic electrical cooking appliances	185.0	226.2	226.3	231.1	232.0 e
	Electric cookers	183.8	227.8	227.8	232.5	233.2 e
	Domestic electrical heating appliances	200.2	229.8	229.8	234.0	236.1 e
	Electric fires	195.1	237.4	237.4	237.4	240.6 e
	Electric water heaters, wash boilers, etc.	247.7	278.3	278.3	280.8	288.0 e
	Electric vacuum cleaners and polishers	194.8	227.3	227.3	240.1	242.3 e
	Domestic electric flat irons	206.7	247.0	247.0	259.7	260.5 e
	Domestic refrigerators, gas and electric	173.3	206.8	209.4	212.3	216.2 e
	Domestic electric refrigerators	175.8	218.2	221.9	226.1	226.1 e
369/2 and 369/3	Batteries and accumulators	229.4	276.4	276.4	276.4	279.8 e
369/4	Electric lamps and fluorescent tubes	193.4	238.2	240.6	240.6	242.5 e
	Vehicles					
380	Wheeled tractors	299.6	363.4 c	366.4	369.4	381.7
381	Motor vehicles					
	Passenger cars	241.7	290.7	291.8	293.5	306.4 e
	Passenger cars‡	220.4	265.1	266.0	267.6	279.3 e
	Commercial and public service vehicles	264.8	317.2	318.5	321.1	335.6 e
	Commercial vehicles	267.6	320.8	322.0	324.2	339.5 e
	Commercial vehicles and chassis not exceeding 3.5 tons Gross Vehicle Weight	265.8	321.4	322.5	324.7	341.7 e
	Commercial vehicles and chassis exceeding 3.5 tons but not exceeding 16 tons Gross Vehicle Weight	276.2	327.4	329.1	331.4	343.4 e
	Commercial vehicles and chassis exceeding 16 tons Gross Vehicle Weight	246.6	291.7	291.7	294.3	303.7 e
	Commercial vehicles not exceeding 1¼ tons Gross Vehicle Weight	267.8	324.2	325.5	327.5	345.9 e
	Commercial vehicles and chassis over 1¼ tons Gross Vehicle Weight	262.9	314.5	315.2	317.3	330.3 e
	Public service vehicles	263.9	305.1	308.1	315.0	321.4 e
	Metal goods not elsewhere specified					
390	Engineers' small tools and gauges					
	Engineers' cutting tools	198.9	244.1	245.4	248.1	255.5
	Engineers' cutting tools: diamond	171.2	199.4	201.8	201.8	207.6
	Engineers' cutting tools and parts: non-diamond	200.0	246.2	246.5	249.3	254.2
	Hacksaw blades	214.8	265.5	269.8	274.5	291.8
391	Hand tools and implements	250.1	296.1	300.7	306.8	311.4
392	Cutlery and tableware, etc.	229.3	256.6	261.5	262.3	262.5
393	Nuts and bolts, etc.	282.8	330.1	332.1	339.1	343.0
	High tensile steel nuts and bolts	300.2	348.4	353.0	353.6	353.5
399	Metal industries not elsewhere specified					
399/1	Metal furniture, office and works equipment	212.3	236.9	237.7	242.8	244.3
	Metal non-domestic furniture	222.5	246.1	247.0	252.6	254.3
	Metal chairs	192.6	213.3	213.3	215.7	216.0
	Metal cabinets	211.4	239.2	241.3	245.4	249.8
399/2	Metal windows and door frames					
	Metal windows	364.4	406.8	412.1	414.6	416.3

Table 3a continued

1968 SIC		1976 Aug	1977 May	Jun	Jul p	Aug p
399/9	Domestic gas appliances	189.0	213.1	218.2	224.3	228.6
	Gas cookers	188.0	211.6	219.8	222.3	225.4
	Gas water heaters and wash boilers	206.0	238.8	238.8	247.5	253.4
	Gas fires and space heaters	184.1	205.4	206.6	218.8	224.7
	Gas water heaters and gas fires	190.1	214.6	215.4	226.7	232.6
399/12	Miscellaneous metal goods					
	Catering equipment	208.1	242.0	242.0	243.3	245.8
	Plumbers' brassware	200.0	215.4	215.6	219.8	222.4
	Domestic oil burning appliances	227.0	274.3	274.3	274.3	274.3
Textiles						
411	Man-made fibres production	176.6	196.3	196.9	196.3	196.6
412	Spinning and doubling on the cotton and flax systems	231.6	247.9	244.1	240.1	240.1
	Cotton yarns, cotton-spun man-made fibres yarns and mixtures of both	265.1	282.4	276.9	271.0	270.9
413	Weaving of cotton, linen and man-made fibres	226.4	257.3	258.6	259.4	261.2
	Woven cotton cloth in the loomstate	239.6	272.6	274.1	271.9	272.8
	Man-made fibres fabrics in the loomstate	213.0	236.6	237.9	240.3	243.0
414	Woollen and worsted	244.8	287.6	287.8	288.0	288.7
414/2	Worsted spinning	235.2	273.5	274.8	275.7	276.7
	Yarns of wool spun on the worsted system	248.4	295.4	294.8	295.8	296.7
	Yarns of man-made fibres spun on the worsted system	190.5	205.9	212.3	212.7	214.2
417	Hosiery and other knitted goods	172.1	196.3	198.3	200.6	201.0
419	Carpets and rugs	214.5	250.3	250.4	250.9	252.0
	Carpets	214.2	250.0	250.1	250.6	251.2
	Carpets – woven	234.4	278.0	278.1	278.3	278.7 e
	Tufted carpets	174.1	194.7	194.7	195.8	196.9
429	Other textile industries					
429/1	Asbestos manufactures	205.0	244.9	245.0	247.9	251.4
Leather, leather goods and fur						
431/1	Leather for footwear	205.9	218.2	218.2	218.4	218.4
Clothing and footwear						
450	Footwear – including rubber footwear	201.9	228.3 r	229.6	235.0	236.7
Bricks, pottery, glass, cement etc						
461	Bricks, fireclay and refractory goods	257.7	304.9	313.2	316.1	319.7
461/1	Refractory goods including bricks	261.2	313.7	324.2	328.5	328.8
461/2	Non-refractory goods including building bricks	256.1	300.9	308.0	310.3	315.5
	Building bricks – delivered	267.7	311.8	312.0	311.7	325.3
	Engineering bricks – delivered	283.9	324.6	325.9	335.8	339.3
463	Glass	232.7	273.0	274.4	275.3	277.5
463/1	Glass other than containers	231.5	265.9	268.2	269.6	273.3
	Flat glass (including safety and silvered glass)	220.9	261.8	261.9	261.9	263.3
	Glazing sheet and plate glass	197.8	246.1	246.1	246.1	246.1
463/2	Glass containers	234.5	283.6	283.6	283.8	283.9
464	Cement	256.2	280.6	305.6	314.6	314.6
	Cement – delivered in bulk	256.1	280.6	305.5	314.6	314.6
	Cement – delivered in bags	256.2	280.7	305.6	314.6	314.6
469/2	Building materials not elsewhere specified	256.4 r	292.7	299.9	306.2	309.3
	Precast concrete products	245.5	275.2	280.6	288.4	292.8
	Precast concrete pipes – delivered	290.4	328.6	334.8	339.0	354.0
	Precast concrete manholes – delivered	226.0	255.7	259.9	263.9	271.2
	Plaster gypsum	228.1	265.0	265.0	265.0	276.6
	Mastic asphalt	226.7	283.3	283.3	294.9	305.1
Timber, furniture etc						
471/1	Timber sawmilling					
	Homegrown hardwood – sawn	245.0	286.2	289.3	291.6	309.1
471/2	Building joinery	274.3	322.8	323.7	326.7	326.7
	Timber structures and structural components	275.4	320.4	321.3	322.0	322.0
	Door sets, doors and door frames (excluding hardwood doors architecturally designed)	271.7	331.4	331.4	332.6	332.6
	Windows and window frames (wood)	306.1	353.2	356.1	359.8	360.0
	Other building joinery (ie architectural and general joinery)	282.9	333.3	333.3	344.1	344.1

1968 SIC		1976 Aug	1977 May	Jun	July p	Aug p
472	Furniture and upholstery	213.9	245.6	249.6	250.9	252.4
	Domestic furniture	210.1	241.2	245.8	247.2	248.9
	Non-upholstered furniture – domestic	216.9	253.8	259.2	261.2	261.7 e
	Bedroom furniture	191.4	216.7	219.1	222.9	224.1 e
	Bookcases, bookshelves, bureaux, occasional furniture	212.2	244.4	252.0	252.5	252.5 e
	Dining room furniture	218.7	247.3	257.3	258.5	259.3 e
	Kitchen furniture	236.2	287.5	293.3	294.7	294.8
	Upholstered furniture	198.9	220.6	224.1	224.5	228.2 e
	Two and three-piece suites	189.2	209.8	210.8	211.6	215.3 e
	Fireside chairs – open wood arm easy chairs	223.7	248.8	258.9	258.9	258.9
473	Bedding, etc	231.1	277.6	279.7	280.0	282.5
	Upholstered spring interior mattresses	234.3	287.0	287.5	287.5	287.5 e
	Divan sets	254.6	295.8	300.9	301.7	301.7 e
Paper, printing and publishing						
481	Paper and board	258.3	289.6	289.6	290.2	290.5
	Printings and writings – excluding newsprint	258.5	285.8	285.8	285.8	285.8
482	Packaging products of paper, board and associated materials					
482/1	Cardboard boxes, cartons and packing cases – fibreboard	249.9	282.4	283.9	285.2	285.7
482/2	Packaging products of paper and associated materials					
483	Manufactured stationery	256.4	292.1	293.6	301.0	304.3
484	Manufactures of paper and board not elsewhere specified					
484/1	Wallpaper	225.1	244.3	244.3	250.4	251.1
489	Other printing, publishing, bookbinding, etc					
	General printing, bookbinding, etc	215.4	232.2	234.6	235.9	239.6
Other manufacturing industries						
491	Rubber manufactures					
491/1	Rubber tyres and tubes	206.6	243.3	243.8	253.6	257.8
492	Linoleum, plastics, floor covering and leathercloth					
	Linoleum and felt base	210.6	226.3	226.3	233.1	254.2 e
102/1 and 103 312	Part Aggregates for concrete	217.2	249.8	252.5	252.5	252.5
361/2 362 369/5 338	Part Electrical installation materials, domestic	213.5	241.4	243.6	249.2	251.7 e
399/1 399/3 472	Part Office equipment and machinery	194.4	219.0	220.2	223.1	224.6
399/1 472	Part Office furniture	238.7	270.7	271.5	275.2	276.3
412 414	Part All spun made-made fibres yarns	203.0	229.1	230.8	231.3	232.2

Addendum to table 3a Confirmation of figures previously published as provisional

1968 SIC		1977 Apr
333	Pumps, valves, compressors, fluid power equipment	253.7
333/1	Pumps	244.2
	Industrial pumps	245.5
	Centrifugal turbine and axial flow pumps	252.4
333/4	Oil/hydraulic fluid power equipment	237.4
336	Construction and earth-moving equipment	278.4
	Contractors plant and parts	277.9
	Concrete mixers	264.0
	Crushing and screening plant and parts	275.7

ø Index based on scheduled outer zone prices for minimum bulk loads of 500 gallons (motor spirit 1000 gallons) exclusive of rebates.

p Provisional.

e Estimates which are subject to possible major revisions.

† Excludes sales to rental companies.

‡ Inclusive of purchase tax (before its abolition), VAT and Car Tax.

r Revised.

c Correction.

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Correction to Table 3a

1968 SIC		Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
276/1	Synthetic resins and plastics materials	1977	—	—	—	241.6	—	—	—	—	—	—	—	—

Revisions to Table 3a

1968 SIC		Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
311/2	Cold rolled steel strip (non-alloy)	1976	—	—	—	267.2	273.7	274.2	279.6	286.2	286.2	301.8	313.1	313.1
		1977	313.1	313.1	313.1	313.1	—	—	—	—	—	—	—	—
333/1	Pumps	1977	—	—	239.6	—	—	—	—	—	—	—	—	—
	Industrial pumps	1977	—	—	240.7	—	—	—	—	—	—	—	—	—
	Centrifugal and axial flow pumps	1977	—	—	248.1	—	—	—	—	—	—	—	—	—

Table 3b Commodities wholly or mainly imported into the United Kingdom (published monthly)

1970 = 100

	1976	1977			
	Aug	May	Jun	Jul p	Aug p
Hides and skins	329.8	387.8	324.2	329.7	333.4
Non-ferrous metals:					
Aluminium, virgin ingot delivered	205.8	246.2	248.8	265.7	265.7
Copper[1]	146.1	135.3	129.3	122.8	112.8
Lead[1]	213.0	303.4	260.1	256.4	249.5
Nickel[2]	229.2	259.8	259.8	259.7	259.7
Tin, ingot min. 99.75%[1]	296.2	374.1	366.1	394.1	423.0
Zinc[1]	336.4	289.0	255.7	254.7	242.6
Zinc[2]	348.0	357.0	318.3	317.6	314.5
Natural rubber	260.8	269.1	257.1	257.7	276.3
Sulphur, crude cif (for acid making)	288.1	297.2	297.2	275.1	275.1
Textiles:					
Raw cotton, all types	396.9	387.7	345.3	326.6	301.8
American types, cif Liverpool	395.7	398.2	347.7	327.5	299.5
Egyptian types, cif Liverpool	402.7	335.5	333.0	322.1	312.9

	1976	1977			
	Aug	May	Jun	Jul p	Aug p
Raw wool – all types	312.1	338.6	333.1	331.2	322.2
Imported	309.2	331.4	330.5	331.0	322.5
Imported, merino	282.3	308.3	308.0	309.9	296.9
Imported, fine crossbred	307.6	327.8	325.7	327.9	320.5
Imported, medium and coarse crossbred	394.6	412.8	412.0	408.2	406.9
British types	327.9	379.5	347.5	332.4	320.7
Timber:					
Imported hardwood (ex-yard or wharf)	312.0	360.0	362.6	361.9	361.0 e
Imported plywood (delivered to consumers)	290.3	330.7	331.7	332.1	332.4 e
Imported softwood (delivered to consumers)	340.3	388.2	389.1	389.7	389.9 e
Woodpulp, imported	334.5	349.5	348.3	344.6	338.6

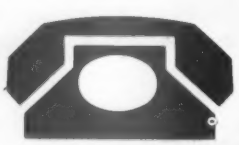
[1] LME settlement price. [2] Producer's price. p Provisional. e Estimates which are subject to possible major revision.

Table 5 United Nations index numbers of world export prices[1]

1970 = 100

	Primary commodities						Non-ferrous metals			Primary commodities and non-ferrous metals[2]		
	Total			Agricultural non-food								
	$	£	Purchasers' currencies	$	£	Purchasers' currencies	$	£	Purchasers' currencies	$	£	Purchasers' currencies
1974 1st qtr	303	318	274	232	244	209	160	168	144	284	298	256
2nd qtr	304	304	263	229	229	198	183	183	159	288	287	249
3rd qtr	309	315	274	221	225	196	142	145	126	287	292	254
4th qtr	320	330	284	212	213	186	126	130	111	294	303	258
1975 1st qtr	312	313	261	201	202	168	124	124	101	287	287	240
2nd qtr	299	309	250	198	204	166	121	125	101	275	284	230
3rd qtr	295	333	261	196	220	173	118	133	105	271	306	240
4th qtr	301	354	271	191	224	172	116	136	104	276	324	249
1976 1st qtr	306	368	279	202	243	184	120	144	109	281	338	256
2nd qtr	310	412	289	212	282	198	135	179	126	286	381	267
3rd qtr	314	427	291	227	308	211	140	190	130	291	395	270
4th qtr	316	459	290	232	337	213	131	190	120	291	423	267
1977 1st qtr	340	476	310	241	338	220	141	197	129	313	439	286
2nd qtr	348	487	314	244	342	220	143	200	129	320	442	289
July[4]	*339*	*473*	*301*	*229*	*319*	*203*	*135*	*188*	*120*	*312*	*434*	*276*
August[4]	*334*	*460*	*298*	*223*	*308*	*199*	*133*	*184*	*119*	*307*	*423*	*274*

[1] Published by the UN in terms of US dollars. For convenience the index numbers are also shown in sterling and in terms of purchasers' currencies by converting the dollar index at prevailing exchange rates. [2] This combined index is not published as such by the UN. [3] Provisional. [4] Projections by Department of Industry.



Wholesale price indices: further information

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01-215 3544	tables 1 and 2	**01-215 3548**	textiles, clothing, timber, paper, etc
01-215 3549	engineering		
01-215 5216	chemicals, steel, building materials, etc	**01-215 3173**	imported commodities

Retailers' stocks in July

Based on the non-seasonally adjusted data of table 1, the level of stocks at book value in July was 22 per cent higher than a year earlier; at constant prices it was 3 per cent higher.

The estimate of the value of physical increase of retailers' stocks at 1970 prices and seasonally adjusted (table 2) suggests a decrease of £82 million in July. This fall from the higher level of the previous four months coincides with a sharp rise in the seasonally adjusted volume of retail sales.

Notes

1 The book value of retailers' stocks in the United Kingdom at end of December 1971 was £1,872 million.

2 With the introduction of VAT, the book values are being valued exclusive of this tax. There is, therefore, a discontinuity in the series in 1973 between March and April. For the year up to March, 1974, the usual comparisons with a year earlier for the book value series have not been given. From April, 1974, the basis of valuation is comparable with that of a year earlier and the percentages changes have been re-introduced. The estimates at constant prices take account of this method of valuation, and are on a consistent basis throughout.

3 For the estimates at constant prices, it should be borne in mind that, when price increases are large, the various problems associated with revaluation of the value series to constant prices become more acute. Thus the relative accuracy with which constant price changes have been measured is likely to have been reduced in recent periods.

4 The statistics given in table 2 were introduced in an article in the issue of 28 March 1975.

5 The series now incorporate the results of the 1975 annual inquiry and improved estimates for Northern Ireland which affect the figures slightly back to 1967. The tables below give the revised series in full.

Inquiries: 01-215 3220.

Table 1 Level of retailers' stocks

Index numbers (end 1971 = 100) *and percentage increase on a year earlier* — At cost at end of month

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
At book values:												
1967	69	71	72	73	74	74	72	73	74	79	82	73
1968	72	74	77	78	79	80	78	79	81	86	90	81
1969	80	82	85	85	87	87	85	84	86	93	97	87
1970	84	86	88	90	89	90	89	89	91	97	102	93
1971	89	91	94	95	95	97	95	95	98	106	110	100
1972	96	99	101	102	103	105	102	102	104	113	119	106
1973	103	107	112	112	112	117	116	118	123	134	143	132
1974	128	129	135	139	144	145	144	143	149	161	171	154
1975	148	150	157	153	158	160	158	158	168	184	198	178
1976	168	171	181	181	181	181	177	177	190	211	226	203
1977	195	199	219	222	222	225	215					
1967	4	3	2	3	3	3	3	3	3	4	3	4
1968	5	5	6	6	8	8	8	8	8	9	10	11
1969	11	11	11	10	9	8	9	7	7	7	7	7
1970	5	5	4	5	3	4	4	5	6	5	6	6
1971	6	6	6	6	6	7	6	7	7	8	8	8
1972	7	8	8	7	8	8	7	8	7	7	8	6
1973	8	8	10	—	—	—	—	—	—	—	—	—
1974	—	—	—	24	28	24	24	21	21	20	19	17
1975	15	17	17	10	10	10	10	11	13	14	16	15
1976	14	14	15	19	15	13	12	12	13	14	14	14
1977	16	17	21	23	23	25	22					
At constant (1970) prices:												
1967	88	91	92	94	94	95	93	94	95	101	104	93
1968	92	94	97	96	98	98	96	96	98	105	109	98
1969	95	97	100	100	101	101	99	98	100	107	111	100
1970	96	97	99	100	99	100	98	97	99	105	109	99
1971	94	96	98	98	97	99	96	96	99	106	111	100
1972	95	97	100	100	100	102	99	99	101	108	114	101
1973	98	101	105	110	114	117	115	115	119	128	135	123
1974	118	117	120	121	123	121	119	117	119	127	132	117
1975	109	108	112	106	108	108	105	104	110	119	127	113
1976	106	106	112	111	110	109	106	105	111	122	128	114
1977	107	107	116	116	115	116	109					
1967	1	—	−1	1	1	—	1	2	2	3	3	3
1968	4	3	5	2	3	4	3	3	3	4	4	5
1969	4	4	4	4	4	3	4	1	2	2	2	2
1970	1	—	−1	—	−2	−1	−1	−1	−1	−2	−1	−1
1971	−2	−2	−1	−2	−2	−1	−2	−1	—	2	1	1
1972	1	2	2	2	3	4	3	4	2	2	3	1
1973	3	4	5	10	13	15	16	16	18	18	19	22
1974	20	16	14	10	8	3	3	1	—	−1	−2	−5
1975	−8	−7	−7	−12	−12	−11	−11	−11	−8	−6	−4	−3
1976	−3	−2	—	5	2	1	1	1	1	2	1	1
1977	1	1	4	5	5	6	3					

Table 2 Value of physical increase of retailers' stocks at 1970 prices

Seasonally adjusted — £ million

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1967	12	1	−19	33	8	7	5	22	−3	−4	−6	−14
1968	30	−3	—	−5	24	10	−2	19	−5	9	2	−5
1969	17	4	3	3	16	−7	12	−13	−5	10	−3	−1
1970	−1	−1	−15	17	−18	7	11	−9	−1	−8	1	1
1971	−9	2	−7	1	−11	19	−6	13	4	24	−14	2
1972	−1	10	−1	13	5	23	−15	24	−24	9	−6	−22
1973	43	25	24	104	57	48	13	24	3	3	14	21
1974	22	−46	4	28	29	−32	5	−16	−26	−19	−14	−44
1975	−25	−31	12	−82	21	—	−8	4	20	33	17	−26
1976	−6	−12	51	−9	−27	−9	−23	16	23	−39	5	−39
1977	10	−17	109	5	−24	14	−82					

See note 2.

Index of industrial production for July

The provisional estimate for the total all-industries' index in July 1977 is 101.8 and that for manufacturing alone is 102.8 (1970 = 100).

Latest provisional estimates for the six months ending July 1977 suggest that the underlying level of industrial output fell over this period. (The change in the incidence of public holidays affected the recorded figures for May and June.)

Before any adjustment, the provisional estimates show that the average levels of the all-industries' index and the corresponding index for manufacturing industries in May to July 1977 were some 1½ per cent and 2½ per cent respectively below their levels in the preceding three months. The analysis by broad market sector shows that, over the same period, the output of the consumer goods, investment goods and intermediate goods industries fell by about 2, 2½ and 1 per cent respectively.

On a longer-term comparison, the all-industries' index in the latest three months was about ½ per cent below its level in the same period a year ago; the corresponding fall for manufacturing industries was about 1 per cent.

The use of series for some industries which measure deliveries rather than production resulted in the all-industries' index overstating the level of output by about ¾ per cent in the second and third quarters of 1976 and understating it by about ½ per cent in the fourth quarter of 1976 and by about ¼ per cent in the first and second quarters of 1977.

The provisional estimates for May and June 1977 are particularly vulnerable to distortions because of holiday effects. The spring bank holiday, usually taken in May, was taken on 6 June in 1977 in England and Wales. Furthermore, an extra public holiday was taken throughout the United Kingdom on 7 June 1977 to celebrate Her Majesty the Queen's Silver Jubilee. The current assessment of the underlying level makes broad allowance for these effects.

The index numbers have been revised to take account of the annual recalculation of seasonal adjustment factors. The provisional estimates for the second quarter of 1977 have also been revised in the light of later information, especially for the construction and ferrous metals industries and for latest data, still provisional, for the engineering industries.

Inquiries: 01-233 8310.

Letters to the Editor

Letters to the Editor should be addressed to the Editor, *Trade and Industry*, Room 437, 1 Victoria Street, London SW1H 0ET, and *not* to HMSO.

Index of industrial production

Seasonally adjusted — 1970 = 100

	Total all industries	All industries other than construction	Mining and quarrying	Manufacturing industries												
				Total	Food, drink and tobacco					Engineering and allied industries						
					Total	Food	Drink and tobacco	Coal and petroleum products	Chemicals and allied industries	Total	Mechanical engineering	Instrument engineering	Electrical engineering	Shipbuilding and marine engineering	Total vehicles	Metal goods n.e.s.
Weights	1 000	850	37	745	84	52	32	7	58	319	100	15	67	16	73	48
1971	100.3	99.9	100.0	99.4	100.7	99.9	101.9	103.3	102.1	98.8	97.7	103.3	101.7	98.7	100.2	93.3
1972	102.5	102.1	84.1	102.0	105.0	104.0	106.5	102.5	108.1	99.2	93.7	102.0	106.6	89.5	104.0	95.4
1973	110.0	110.5	92.6	110.6	109.3	106.3	114.2	110.0	120.7	107.4	102.5	110.2	121.3	90.6	107.6	102.9
1974	106.9	108.5	78.8	108.9	109.9	104.5	118.8	106.0	126.4	108.6	106.9	118.0	122.6	92.4	103.0	103.6
1975	101.7	103.3	86.0	102.4	108.7	101.1	121.1	92.0	116.0	103.6	104.9	118.6	113.2	97.7	96.7	95.0
1976	102.2	104.5	89.2	103.4	110.7	103.5	122.7	96.3	127.2	99.7	97.1	114.3	110.5	92.0	96.8	92.9
1976																
1st qtr	101.4	102.9	86.7	101.6	106.9	100.8	116.9	93.9	122.8	99.1	99.3	110.8	106.7	93.0	96.1	91.4
2nd	102.5	104.7	89.1	103.6	112.5	104.9	124.9	96.9	126.3	100.1	98.5	115.5	110.1	93.1	96.7	92.3
3rd	101.8	104.5	87.2	103.8	112.3	104.3	125.4	96.5	128.4	99.5	95.7	111.7	111.8	91.7	97.0	93.4
4th	103.1	106.0	94.0	104.7	111.3	103.8	123.7	97.9	131.4	100.2	94.9	119.1	113.3	90.0	97.6	94.6
1977																
1st qtr	103.6	107.5	103.1	105.6	113.3	107.4	123.0	96.0	132.6	101.2	97.1	114.0	114.7	90.7	97.3	96.7
2nd	102.0	105.5	105.7	102.9	113.1	106.5	124.0	94.4	129.0	99.3	92.6	116.4	111.4	90.6	98.4	95.6
1976																
May	103.8	106.3	89	105.2	114	106	126	94	126	101	99	116	110	89	99	95
June	101.5	103.6	89	102.4	111	103	124	98	128	100	98	116	111	96	95	90
Jul	101.8	104.5	86	104.0	113	104	127	96	126	101	96	111	111	90	105	92
Aug	101.2	103.8	87	103.1	111	104	124	92	127	99	96	112	112	94	91	96
Sept	102.3	105.1	89	104.3	113	105	125	101	131	99	95	112	112	92	95	93
Oct	102.7	105.4	92	104.8	112	104	125	100	128	100	94	118	113	85	100	96
Nov	103.3	106.2	94	104.9	111	105	121	98	135	100	95	119	113	94	98	93
Dec	103.4	106.3	96	104.4	111	102	125	96	132	100	95	120	114	91	95	95
1977																
Jan	103.7	107.7	101	105.5	113	108	121	91	128	102	98	114	115	87	100	97
Feb	103.4	107.3	103	105.6	113	108	121	101	135	101	97	114	115	91	93	98
Mar	103.6	107.5	105	105.8	114	106	127	96	135	101	96	114	114	94	99	96
Apr	102.5	106.1	104	103.7	115	109	125	94	129	101	94	116	112	88	101	97
May	103.6	107.4	107	105.1	113	106	124	92	131	101	93	116	111	94	103	99
Jun	100.0	103.1	106	100.9	112	104	123	96	127	96	91	117	110	89	91	91
Jul p	101.8	104.9	103	102.8	114	106	125	94	128	99	90	117	110	83	100	100
% change latest 3 months on previous 3 months	−1.3	−1.7	+1.2	−2.3	−1.1	−1.9	—	−2.9	−3.1	−2.1	−4.8	+1.8	−2.8	−2.5	—	−0.1
on a year earlier	−0.6	+0.3	+19.9	−1.2	+0.2	+1.2	−1.2	−2.2	+1.6	−1.8	−6.3	+2.0	−0.2	−3.1	−2.0	+4.6

	Manufacturing industries (continued)													Construction	Gas, electricity and water
	Metal manufacture			Textiles, leather and clothing				Bricks, pottery, glass, etc							
	Total	Ferrous	Non-ferrous	Total	Textiles	Leather leather goods and fur	Clothing and footwear	Total	Bricks, cement, etc	Pottery and glass	Timber, furniture, etc	Paper, printing and publishing	Other manufacturing industries		
Weights	57	43	14	76	49	3	24	27	17	10	22	64	31	146	72
1971	91.3	89.8	95.8	102.2	100.6	103.0	105.4	108.1	107.0	109.8	103.0	97.3	99.8	103.1	104.0
1972	91.4	89.4	97.3	104.5	102.9	104.5	107.8	115.2	115.1	115.3	113.5	102.7	104.3	104.9	111.6
1973	100.0	97.3	108.5	110.1	108.6	101.1	114.6	126.0	123.7	129.5	132.6	112.1	116.6	107.0	118.3
1974	91.7	87.7	104.2	103.1	99.2	94.9	112.2	116.6	108.3	129.5	112.1	108.9	114.5	97.9	118.9
1975	78.6	74.2	92.2	99.5	93.8	92.9	112.2	107.7	99.7	120.4	110.2	95.6	105.4	92.6	120.8
1976	85.2	82.0	95.2	101.7	97.4	95.6	111.3	110.9	101.7	125.2	112.0	97.8	114.9	88.9	123.5
1976															
1st qtr	81.7	78.0	93.3	101.6	97.5	97.7	110.6	110.1	104.0	119.7	111.3	95.3	110.5	92.5	125.0
2nd	87.7	85.2	95.8	99.7	95.2	93.8	109.8	110.1	101.7	123.2	110.6	97.8	113.1	90.0	124.3
3rd	86.4	83.4	95.7	101.7	97.5	94.7	111.4	112.9	102.4	129.3	112.7	98.2	114.2	86.2	119.8
4th	85.1	81.6	96.1	103.6	99.3	95.9	113.4	110.4	98.8	128.5	113.5	100.0	121.9	86.8	125.0
1977															
1st qtr	84.2	79.7	98.2	105.1	99.5	97.4	117.7	108.3	95.7	128.1	110.1	102.2	124.1	80.9	128.6
2nd	81.0	77.5	91.7	99.5	93.3	97.7	112.6	105.9	92.7	126.4	98.9	101.1	118.4	81.9	131.6
1976															
May	100	100	99	101	97	94	111	110	101	123	112	99	115		125
Jun	79	75	93	98	93	94	108	111	101	125	108	97	112		123
Jul	87	83	97	100	97	95	109	114	101	133	111	99	110		119
Aug	87	85	94	101	97	95	110	112	102	127	113	98	113		119
Sept	86	82	96	104	99	95	115	114	104	129	114	98	120		122
Oct	86	82	100	104	99	96	113	109	98	124	117	101	121		119
Nov	85	83	91	103	99	96	111	112	99	132	112	99	124		125
Dec	84	80	97	105	100	96	116	111	99	129	111	100	121		131
1977															
Jan	87	83	100	105	101	97	114	108	94	130	111	102	123		133
Feb	84	79	97	106	100	97	120	107	96	123	111	103	125		127
Mar	82	77	97	105	98	97	119	110	97	131	109	102	124		126
Apr	78	72	97	101	95	98	114	105	92	126	103	101	119		131
May	90	90	89	101	95	98	114	109	94	133	102	102	123		131
Jun	75	71	89	97	90	98	111	103	92	120	92	100	113		133
Jul p	83	77	101	103	96	98	116	100	90	116	102	100	117		127
% change latest 3 months on previous 3 months	+1.9	+4.5	−4.3	−3.6	−4.0	+0.3	−3.3	−3.1	−3.3	−2.9	−8.2	−1.5	−4.2		+1.6
on a year earlier	−6.8	−8.1	−3.4	+0.2	−2.0	+3.9	+3.8	−6.5	−9.2	−3.1	−10.9	+2.6	+4.9		+6.4

p Provisional.

Inquiries: 01-233 8310.

Regional selective assistance: offers of £10,000 or more

The table shows offers of £10,000 or more made since 31 July 1974 under section 7 of the Industry Act 1972 against which a first payment to the company concerned was made in the period 1 April to 30 June 1977. Offers of interest relief grant with a loan equivalent of £10,000 or more are also shown.
Inquiries: 01-211 4216.

Area and company	Type of assistance committed (see notes at foot of table)	Amount of assistance committed (£)	Standard industrial classification (minimum list heading): the activity involved is production unless otherwise stated	Reason (see notes at foot of table)
Scotland				
British Products Sanmex Co Ltd	IRG	12 000	Chemicals	A
Cartland Hydraulics Ltd	IRG	11 700	Hydraulic equipment	A
J. and P. Coats (UK) Ltd	RG	19 600	Textile distribution	A
W. J. Clow and Co Ltd	IRG	7 650	Ladders	A
Crighton Commercial Ltd	LN	30 000	Shiprepairing and marine engineering	A
Tom Hannah (Agencies) Ltd	IRG	8 400	Marketing confectionery	A
Heritan Ltd	IRG	103 500	Marine consultancy	A
Kilspindie Ltd	IRG	41 625	Knitwear	B
Bernat Klein Design Ltd	IRG	13 250	Ladies' garments	A
James H. Lamont and Co Ltd	IRG	118 125	Non-ferrous metal fittings	B
A. Marlow Ltd	RG×3	13 748	Light clothing distribution	A
John McGavigan and Co Ltd	IRG	5 975	Printing	A
McGeoch and Macphail Ltd	IRG	30 625	Marine electrical equipment	A
A. H. McIntosh and Co Ltd	IRG	29 250	Furniture	A
John Menzies (Holdings) Ltd	IRG	12 000	Newspaper wholesalers	A
R. L. Munro of Edinburgh Ltd	IRG	30 250	Knitwear	A
Polaroid (UK) Ltd	IRG	800 000	Cameras, films, etc	A
Pye of Cambridge Ltd	IRG+RG	278 500	Telecommunications equipment	A
Smith, Anderson and Co Ltd	IRG	73 500	Paper	A
Starwood Fisheries (Scotland) Ltd	IRG	32 500	Fisheries	A
Stewartry Construction Co (Dundrennan) Ltd	IRG	6 440	Woodwork buildings	A
Strathclyde Textiles Ltd	IRG	6 875	Carpets	A
Super-cool Ltd	IRG	46 800	Motor vehicle components	A
Tandberg (Electronics) Ltd	IRG	156 000	Electronic components	A
Vale Board Mills Ltd	IRG	16 450	Paper and board	B
John Walker and Sons Ltd	IRG	1 400 000	Whisky	A
Total		3 304 763		
Wales				
Caristrap (UK) Ltd	IRG	56 000	Leather goods	A
Cwmbran Litho Ltd	IRG	4 700	Colour printing	A
F. Francis and Sons Ltd	IRG	24 500	Metal containers	A
Galatrek Finance Ltd	IRG	8 000	Electrical machinery	A
Gwent Steel Ltd	IRG	4 800	Steel processing	A
Marshall Refractories Ltd	IRG	12 300	Refractories	A
ML Enterprises	IRG+RG	4 540	Plastic moulding	A
Peace Transfers Ltd	IRG+RG	76 750	Printing equipment	A
Pwllheli Granite Co Ltd	IRG	8 750	Quarry extraction	A
Undercover Products (International) Ltd	IRG	7 750	Non-woven fabric products	A
Western Gloves (Manufacturing) Ltd	LN	17 500	Ladies outerwear	A
Total		225 590		
Yorkshire/Humberside				
Appleby Slag Co Ltd	IRG	11 760	Slag processing	A
Aurora Power Transmission Ltd	IRG	3 576	Transmission equipment	A
Avon Display Co Ltd	IRG	6 056	Shop displays	A
A. C. Bamlett Ltd	IRG+RG	13 760	Agricultural machinery	A
British Wool Marketing Board	IRG+RG×3	87 500	Wool marketing	A
Champion Associated Weavers Ltd	IRG	80 625	Carpets	B
Crosrol Ltd	IRG	163 520	Textile machinery	A
Frederick Crowther and Son Ltd	IRG	9 500	Sheet metal fabrications	A
Elida Gibbs Ltd	IRG	246 330	Toilet preparations	A
Hailwood and Ackroyd Ltd	IRG	6 076	Hydraulic valves	A
Hartley and Sugden Ltd	IRG	14 224	Boilers	A
Hickson and Welch Ltd	IRG	10 920	Organic chemicals	A
Hothfield Carpets Ltd	IRG	5 900	Carpets	A
International Harvester Co of GB Ltd	IRG	172 512	Agricultural machinery	A
International Sports Co Ltd	RG×3	76 700	Sports goods distribution	A
William Lamb and Co (Footwear) Ltd	IRG	68 398	Footwear	A
Mech Electric 24 Ltd	IRG	117 340	Welding	A
NR Components (Todmorden) Ltd	IRG+RG	27 438	Tubular metal frameworks	A
Samuel Osborne and Co Ltd	IRG	13 840	Special steels and engineering	A
Stepney Contractors Ltd	IRG	5 955	Building and contracting	A
Titanium Fabricators Ltd	IRG	39 129	Fabricating metals	A
H. H. Woodward (Leeds) Ltd	IRG	7 424	Packing cases	A
Yorkshire Dry Dock Co Ltd	IRG	6 807	Shipbuilding and shiprepairing	A
Total		1 195 290		
North West				
Ashton Brothers and Co (Holdings) Ltd	IRG	5 880	Household textiles	A
John Barnes and Sons Ltd	LN	23 884	Specialist fabrics	B
Bauer (Great Britain) Ltd	IRG	72 000	Electrical motors	A
BKW Engineering	IRG	3 650	Slurry tankers	A
Blackburn Products Co Ltd	IRG	1 920	Tallow and bone meal	A
Bowater Industrial Packaging Ltd	IRG	6 615	Packaging products	A
Braby Group Ltd	IRG	38 325	Steel drums and fabricators	A
Calder Components Ltd	IRG	12 228	Shoe components	A
CCM (Lancashire) Ltd	IRG	15 000	Industrial overalls	A
CCM Ltd	IRG	8 695	Motor cycles	A
CMI (Plastics) Ltd	IRG	8 288	Synthetic plastics materials	A
Coated Metals (Holdings) Ltd	LN	300 000	Steel aluminisors	A
Cobden Chadwick Ltd	IRG	72 150	Printing machinery	A
Coleman Milne Ltd	IRG	19 875	Motor vehicles	A
Data Recording Instrument Co Ltd	IRG	441 150	Computers	A
W. Devis and Sons Ltd	IRG	44 100	Meat processors	B
Evison's (Coffin Manufacturers) Ltd	IRG	5 520	Veneered timber	A
Excelarc Engineering Co Ltd	IRG	5 718	Industrial catering equipment	A
Expack Egg Processing Ltd	IRG	46 550	Miscellaneous foods	A
FD Centre UK Ltd	IRG	137 062	Light machining	A
Ferranti Engineering Ltd	LN	1 500 000	Electrical machinery	B
FES Northern Ltd	IRG	3 625	Construction engineers	A
David Freeman and Partners Ltd	IRG	12 690	Meat canners	A
Galaxy (Mobile Units) Ltd	IRG	8 120	Caravans	A
Gibson Cooper Ltd	IRG	2 030	Furniture	A
L. Greenberg and Sons Ltd	IRG	24 000	Toughened glass	A
Gunnermead Ltd	IRG	3 550	Sports and leisurewear	A
Hardura Ltd	IRG	17 442	PVC foam	A
G. Henshall and Sons	IRG	9 672	Food preserves	A
Hills Pharmaceuticals Ltd	IRG	69 000	Wholesale distribution	A
H. Hunt Ltd	IRG	13 401	Sports equipment	A
Huyton Heat Treatments Ltd	IRG	12 925	Metal processing	A
Ingersoll-Rand Co Ltd	IRG	36 000	Compressed air products	A
KME	GR	860 000	Electric appliances	B
Lancaster Glass Fibre Ltd	IRG	14 700	Glass fibre	A

Area and company	Type of assistance committed (see notes at foot of table)	Amount of assistance committed (£)	Standard industrial classification (minimum list heading) : the activity involved is production unless otherwise stated	Reason (see notes at foot of table)
Leyland Cabinets Ltd	IRG	4 480	Cabinet furniture	A
Leyland Chemicals Ltd	IRG	5 280	Food chemicals	A
Manesty Machines Ltd	IRG	61 250	Chemical machinery	A
Marine Engineering Co (Stockport) Ltd	IRG	9 410	Electric motors	A
C. R. Massie	IRG	49 350	Reclamation of waste materials	A
Robert McBride (Middleton) Ltd	IRG	61 000	Domestic bleaches and detergents	A
Simon Megson Ltd	IRG	2 190	Food chemicals	A
Mersey Welding and Engineering Co Ltd	IRG	2 315	Sheet metal and engineering	A
Joseph Metcalf Ltd	IRG	13 182	Fertilisers	A
Montgomery Tomlinson Ltd	IRG	7 420	Bedding	A
Mossley Wool Combing and Spinning Co Ltd	IRG	29 400	Worsted spinning	A
National Rejectors (UK) Ltd	RG	29 600	Coin machines	A
Penthouse Carpets Ltd	IRG	5 728	Carpets	A
Pierpoint and Bryant (Sales) Ltd	IRG	8 566	Curing of hides and skins	A
Princes Foods Ltd	IRG	8 599	Food production and distribution	A
P and W Printers Ltd	IRG	16 000	Wrapping materials	A
Ridings Sawmills Ltd	IRG	23 500	Sawmilling	A
Rigby Engineering (Bolton) Ltd	IRG	10 695	Mechanical engineering	A
Storey Brothers and Co Ltd	IRG	3 900	Photogravure printing cylinders	A
Storey Brothers and Co Ltd	IRG	44 850	Vinyl wall covering	A
Storey Brothers and Co Ltd	IRG	12 250	Synthetic rubber sheeting	A
Stuart Engineering Co (Accrington) Ltd	IRG	3 420	Mechanical engineering	A
Sulzer Bros (UK) Ltd	IRG	42 000	Pumping installations	A
Tolona Pizza Products Ltd	IRG	33 000	Food production and distribution	A
Turner and Newall Ltd	RG × 3	31 178	Friction products wholesaling	A
Turner and Newall Ltd	IRG	50 400	Industrial materials	A
Tweedy of Burnley Ltd	IRG	58 800	Food baking machinery	A
United Co-operatives Dairies Ltd	IRG	4 930	Milk	A
Viota Foods Ltd	IRG	156 000	Bread and flour confectionery	A
Warwick and Bailey Ltd	IRG	12 150	Engineering and fabricating	A
Westbrook (Liverpool) Ltd	IRG	70 200	Fireboard cartons	A
West Lancashire Tailors Ltd	IRG	1 320	Uniforms	A
Wrightstock Ltd	IRG	91 000	Steel processing	A
Total		4 819 128		
Northern				
AAF Ltd	IRG	179 550	Air pollution control	A
Albright and Wilson Ltd	IRG	9 650	Chemicals	A
Alcan (UK) Ltd	RG × 3	23 000	Aluminium production and distribution	A
Angloplas Polythene Ltd	IRG	3 480	Polythene extruders	A
F. J. Booth and Partners Ltd	IRG	7 392	Construction	A
William Browns Sawmills Ltd	RG	64 000	Sawmilling	A
Carnation Crayon Co Ltd	IRG	6 000	Stationery	A
Christonette International	IRG	10 000	Plastics exporting	A
Clark Chapman Ltd	IRG	27 560	Marine equipment	A
Cleveland Bridge and Engineering Co Ltd	IRG	107 500	Industrial plant and steel work	A
Cross Paperware Ltd	IRG	22 108	Disposable tableware	A
DKM (Conductors) Ltd	IRG	5 535	Aluminium anodising	A
Ltd				
Egremont Tubes Ltd	IRG	14 812	Packaging products	A
Garrodprint Ltd	IRG	9 250	Printing	A
Harris and Sheldon Group Ltd	IRG	40 150	Sports equipment	A
Honeywill-Atlas Ltd	IRG	31 900	Chemicals	A
Hunter the Bakers Ltd	IRG	2 892	Bread and flour confectionery	A
ICI Ltd	IRG	50 000	Chemicals	A
IMS Lycrete Ltd	IRG	4 080	Metal recovering	A
Keland Electrics Ltd	IRG	31 536	Electrical machinery	A
Loxstar Ltd	IRG	35 155	Menswear	A
Magnet Joinery Ltd	RG	56 600	Building materials	A
Newalls Insulation Co Ltd	IRG	149 700	Thermal insulation materials	B
Plastilux Ltd	IRG	12 250	Plastic products	A
Port Talbot Plant Ltd	IRG	11 810	Construction	A
Precision Polyurethane Mouldings Ltd	IRG	11 535	Plastics materials	A
Preston Farmers Ltd	IRG	61 425	Animal foods	A
B. Rhodes and Son Ltd	IRG + RG	12 964	Alarms and signalling	A
Robinson Brothers Ltd	IRG	26 600	Organic chemicals	A
Smart and Brown Engineers Ltd	IRG	40 000	Domestic electrical appliances	A
Alex Smiles Ltd	IRG	4 800	Metal processing	A
Vald Birn A/S	IRG	386 000	Iron foundry	A
Wavin Plastics Ltd	IRG	41 600	Plastics products	B
Total		1 500 834		
South West				
Cornish Calcified Seaweed Co Ltd	IRG	2 909	Artificial fertilizers	A
Total		2 909		
East Midlands				
Adams Egg Products Ltd	IRG	9 240	Meat products	A
Pretty Polly Ltd	IRG	5 600	Hosiery distribution	A
Sidetracker Engineering Ltd	LN	21 000	Powered industrial trucks	A
Total		35 840		
Total amount of assistance committed		11 084 354		
Total amount paid in regional selective assistance during period		40 217 000		

Notes:

IRG	Interest relief grant
LN	Loan
RG	Removal grant
GR	Grant
A	New jobs being created
B	Preservation of employment

Selective assistance under section 8 of the Industry Act 1972

Sectoral assistance

The following table shows offers of sectoral assistance amounting to £5,000 or more against which first payments to the companies concerned were made in the period from 1 April to 30 June 1977.

Ferrous foundry industry scheme

Area and company	Amount of assistance committed (£)
East and West Midlands	
Trepland Engineering Ltd	6 275
Bryan Donkin and Co Ltd	29 250
Fletcher and Stewart Ltd	159,350
Clarke Chapman Ltd	153 250
Richards Foundries Ltd	177 800
Ruston-Bucyrus Ltd	59 300
The Crown Foundry Co Ltd	359 600
Vowles Foundries Ltd	415 800
Bullers Engineering Ltd	102 250
Edwin Preston and Co Ltd	22 785
Catshill Foundry Ltd	57 555
Green and Russell Ltd	213 000
Brico Metals Ltd	143 250
Black Lake Foundries Ltd	125 000
Potterton International Ltd	212 750
Clay Cross (Iron and Foundries) Ltd	150 400
South West	
Hamworthy Engineering Ltd	364 350
Terrill Bros (Founders) Ltd	11 250
North West	
Moston Malleable Castings Co Ltd	14 250
William Coupe (Higher Walton) Ltd	109 700
L. Gardner and Sons Ltd	158 750
Holcroft Castings and Forgings Ltd	88 250
Northern	
C. W. Taylor and Son Ltd	68 175
Blackett Hutton and Co Ltd	314 650
Stockton Castings and Co Ltd	16 000
W. Shaw and Co Ltd	6 025
Wales	
Broads Manufacturing and Co Ltd	17 115
Scotland	
Robert Taylor and Co (Ironfounders) Ltd	116 400
The North British Steel Group Ltd	914 050

Area and company	Amount of assistance committed (£)
Montrose Foundry Ltd	41 400
R. B. Tennent Ltd	364 500
Glenfield and Kennedy Ltd	925 950
Wilson Pipe Fittings Ltd	59 420
Eastern	
W. Lucy and Co Ltd	53 750
Crane Ltd	307 225
Yorkshire and Humberside	
Firth Vickers Foundry Ltd	197 500
George Oxley and Sons Ltd	101 200
Yorkshire Repetition Castings Co Ltd	20 875
Thomas Clarke and Sons (Sheffield) Ltd	51 980
GEC Foundries Ltd	278 400
RMI (Bingley) Ltd	260 000
Firth Brown Castings Ltd	272 100

Machine tool industry scheme

Area and company	Amount of assistance committed (£)
Scotland	
Hugh Smith (Glasgow) Ltd	181 000
Northern	
Charles Churchill Ltd	776 000
Yorkshire and Humberside	
Landis Lund Ltd	100 875
Slater and Crabtree Ltd	6 450
West Midlands	
Clarke Chapman Ltd	145 450
South West	
The Plessey Co Ltd	843 000
London and South Eastern	
Startrite Engineering Co Ltd	67 587
Alan Grinders Ltd	14 450
Vero Precision Engineering Ltd	11 600

Paper and board industry scheme

Area and company	Amount of assistance committed (£)
Scotland	
Inveresk Paper Co Ltd	8 668
North West	
Bowater-Scott Corporation Ltd	63 790
Eastern	
Thames Board Mills Ltd	124 992
London and South Eastern	
Bowater United Kingdom Paper Co Ltd	24 636
C. Townsend Hook and Co Ltd	47 324

Clothing industry scheme

Area and company	Amount of assistance committed (£)
North West	
Rosenda Blackburn Ltd	10 836
John Peck and Co Ltd	10 712
East Midlands	
Courtaulds Knitwear Ltd	31 457
J. B. Armstrong and Co Ltd	18 807
Yorkshire and Humberside	
Sumrie Clothes Ltd	39 168
South Eastern	
Costas Brothers Gowns Ltd	63 332
Claytons of Howe Ltd	5 000
West Midlands	
Briggs Jones and Gibson	17 336
East Anglia	
F. W. Harmer and Co Ltd	6 726
Northern Ireland	
Desmond and Sons Ltd	13 400
Albion Ltd	6 801
Covering more than one area	
Beaver of Bolton Ltd	17 983
Hinkley Knitting Co Ltd	19 896
S. Gore and Sons Ltd	8 716
Aquascutum Ltd	33 293

Accelerated projects scheme

Announced in the Chancellor's budget speech in April 1975, the accelerated projects scheme was a selective scheme to promote counter-cyclical industrial investment and modernisation which would not otherwise take place due to the adverse economic climate. The main criteria were that projects should be a net addition to the firm's capital investment programme; that they would be deferred but for government assistance; that they should be commercially sound; and that they should lead to an improvement in the balance of payments.

The table shows offers made since 1 September 1975, against which a first payment was made to the company concerned in the period 1 April to 30 June 1977.

Area and company	Product/ activity	Type of assistance [1]	Amount of assistance committed (£)
Yorkshire and Humberside			
George Turton, Platts and Co Ltd	Drop forgings	IRG	334 000
West Midlands			
Steel Stampings Ltd	Mechanical engineering	IRG	284 000
Henry Wiggin Ltd	Nickel alloys	IRG	494 000
W. Canning and Co Ltd	Metal finishing	IRG	125 000
Drury Engineering Co Ltd	Pressure vessels	IRG	88 000
Chloride Alcad Ltd	Alkaline batteries	IRG	100 000
Webley and Scott Ltd	Shotguns and revolvers	IRG	150 000
Robert Morton DG Ltd	Food and drink processing machinery	IRG	102 000
Eastern			
R. H. Cole Ltd	Thermo-plastics	IRG	517 000
Pauls and Whites Ltd	Animal feedstuffs	IRG	115 000
Northern			
Alcan (UK) Ltd	Aluminium smelting	IRG	70 000
Covering more than one area			
Alldays and Peacock Ltd	Fans, pumps	IRG	94 000

[1] IRG – interest relief grant.

Wholesale textile houses: sales and stocks in July

Sales by wholesale textile houses in July showed an increase of 3 per cent on a year earlier, compared with an increase of 1 per cent in May and a decrease of 9 per cent in June.

The value of stocks at the end of July showed an increase of 8 per cent compared with the same period last year.

Inquiries

These statistics are prepared by Textile Distributors' Association. Inquiries should be addressed to the Secretary, Textile Distributors' Association, 3 Berners Street, London W1P 4JP (01-580 2902).

Table 1 Textiles: wholesale sales and stocks

Index numbers and *percentage increase compared with a year earlier* 1950 = 100

		Value of home sales		Value of stocks end period	
1966		110	*–3*	..	..
1967		104	*–5*	..	..
1968		108	*4*	..	..
1969		103	*–5*	..	..
1970		107	*4*	..	..
1971		115	*8*	..	..
1972		121	*5*	..	..
1973		134	*11*	..	..
1974		147	*9*	..	..
1975		147	*1*	..	..
1976		146	*–1*	..	..
1974	1st quarter	134	*12*	189	*3*
	2nd quarter	131	*7*	202	*18*
	3rd quarter	148	*13*	194	*12*
	4th quarter	173	*6*	198	*–3*
1975	1st quarter	143	*7*	219	*16*
	2nd quarter	135	*3*	197	*–2*
	3rd quarter	146	*–1*	193	*–1*
	4th quarter	165	*–5*	224	*13*
1976	1st quarter	133	*–8*	234	*7*
	2nd quarter	127	*–6*	212	*8*
	3rd quarter	149	*2*	204	*6*
	4th quarter	176	*8*	228	*2*
1977	1st quarter	140	*5*	252	*7*
	2nd quarter	125	*–2*	224	*6*
1976	June	119	*–9*	212	*8*
	July	115	*–8*	221	*6*
	August	137	*9*	216	*5*
	September	194	*4*	204	*6*
	October	184	*–4*	208	*6*
	November	169	*–13*	229	*–1*
	December	175	*15*	228	*2*
1977	January	85	*–1*	221	*4*
	February	148	*8*	248	*9*
	March	186	*7*	252	*7*
	April	139	*2*	228	*10*
	May	129	*1*	242	*11*
	June	108	*–9*	224	*6*
	July	119	*3*	239	*8*

Table 2 Analysis by department

Percentage increase compared with a year earlier

	Sales		Stocks[1]
	July 1977	Jan-Jul 1977	Jul 1977
Women's knitted outerwear, blouses and skirts	14	9	24
Women's coats, costumes, furs and raincoats	2	–14	41
Women's underwear	–13	8	15
Women's hose and children's socks	4	14	13
Women's millinery	3	–13	–6
Haberdashery, ribbons and wool	17	18	11
Children's wear	–2	10	16
Men's and boys' shirts, pyjamas and outfitting	5	1	13
Gloves	–8	6	14
Piece-goods and nets	–29	–15	–49
Household textiles	33	17	16
Floor coverings, furniture and hardware	1	–3	–1
Boots and shoes	–20	20	–10
Total[2]	3	2	8

[1] Including some items not included among the sub-headings.
[2] Values at cost.

Advertisements for 'Trade and Industry'

From 19 September, all advertisement inquiries and bookings should be addressed to our Advertisement Department at 13 Great James Street, London WC1, telephone 01-242 9478.

Made-up clothing: orders and deliveries in June

In the three months ended June 1977, deliveries by the clothing industry were provisionally estimated to have been 2 per cent lower than in the preceding three months while net new orders were 10 per cent lower. Orders-on-hand at the end of June 1977 were 4 per cent lower than the end-March 1977 level. (These comparisons are based on the seasonally adjusted series in the accompanying tables.)

In using the index numbers shown in the table, it should be borne in mind that, when price increases are large, the various problems associated with constructing a constant value series become more acute. Because of these difficulties the relative accuracy of the estimates is likely to have been reduced in recent years.

Inquiries: 01-212 0116.

Made-up clothing

Index numbers of total orders and deliveries

	Orders-on-hand (end period)		Net new orders		Deliveries	
	December 1969 = 100		Average 1970 Deliveries = 100		Average 1970 Deliveries = 100	
1968	107		100		97	
1969	100		97		97	
1970	103		102		100	
1971	119		108		104	
1972	125		110		109	
1973	155		123		117	
1974	145		115		114	
1975	142		118		115	
1976	135		118		114	
	Actual	Seasonally adjusted	Actual	Seasonally adjusted	Actual	Seasonally adjusted
1975						
1st qtr	135	139	116	124	116	121
2nd	165	151	133	119	114	112
3rd	129	141	97	114	114	115
4th	142	149	128	117	116	112
1976						
1st qtr	126	130	109	113	113	114
2nd	148	135	126	116	106	109
3rd	134	147	108	128	120	122
4th	135	142	129	117	118	113
1977						
1st qtr p	142	146	124	129	120	121
2nd p	153	140	123	115	114	119
1976						
Jan	129	128	94	111	102	123
Feb	128	130	115	117	116	113
Mar	126	130	117	111	119	107
Apr	132	131	128	117	105	104
May	150	134	149	122	111	118
Jun	148	135	101	109	103	105
Jul	147	148	102	137	117	122
Aug	136	143	88	114	108	122
Sep	134	147	135	134	136	123
Oct	132	137	151	116	133	113
Nov	138	134	141	112	123	112
Dec	135	142	94	122	99	113
1977						
Jan p	141	140	111	131	106	128
Feb p	136	138	124	126	126	123
Mar p	142	146	137	129	127	114
Apr p	151	151	132	121	114	114
May p	161	144	135	106	116	117
Jun p	153	140	100	119	113	126

p Provisional.

Footwear industry: orders, deliveries and stocks

In the three months ended June 1977 deliveries in the footwear industry were estimated to be 1 per cent higher on a seasonally adjusted pairage basis, than in the three months ended March 1977. Net new orders were 24 per cent lower than in the previous three months, while at the end of June orders on hand were 2 per cent down on the March 1977 level. The index of output in the three months ended June 1977 was 4 per cent lower than in the three months ended March 1977.

A detailed breakdown of manufacturers' deliveries by type of footwear in pairage and value terms, together with figures of exports, imports, consumers' expenditure, prices and employment is published in the Business Monitor production series under the reference PQ 450.

The index of output is calculated from the value of total sales and work done by firms classified to the footwear industry (minimum list heading 450 of the standard industrial classification). In using the index numbers it should be borne in mind that when price increases are large, the various problems associated with constructing a constant price value series become more acute. Because of these difficulties the relative accuracy of the estimates is likely to have been reduced in recent years.

The data on pairage and value relate to complete footwear only sold by manufacturers classified to MLH 450 and to other industries (eg rubber) in the SIC, employing 25 or more persons.

Inquiries: 01-212 6787.

Index of output: orders on hand, net new orders, deliveries and stocks of complete footwear

Monthly averages or monthly totals

		Index of output 1970 = 100	Orders on hand (end period)		Net new orders			Deliveries			Stocks (end period)	
			Million pairs	£m	Million pairs		£m	Million pairs		£m	Million pairs	
1966			33.6					16.4				
1967			37.8		16.5			16.1				
1968		113	41.6		17.3			17.0				
1969		108	34.6		15.9			16.5				
1970		100	38.9		16.6			16.2				
1971		108	32.5	55.7	15.7			16.2		23.8	19.4	
1972		104	29.5	59.6	15.2		24.8	15.4		24.5	18.5	
1973		108	46.2	85.2	17.1		30.5	15.7		28.4	16.5	
1974		107	44.3	79.5	14.3		30.9	14.4		31.3	18.0	
1975		101	38.8	91.8	13.2		36.2	13.7		35.1	15.8	
1976		101	46.8	132.9	13.8		42.8	13.1		39.4	14.4	
		Seasonally adjusted	Actual	Actual	Actual	Seasonally adjusted	Actual	Actual	Seasonally adjusted	Actual	Actual	
1975	1st quarter	106	36.2	63.2	11.9	11.0	31.3	14.6	14.6	36.7	18.3	
	2nd	95	41.2	82.4	14.0	13.4	36.8	12.3	13.1	30.4	23.1	
	3rd	101	33.1	70.0	11.4	13.9	33.1	14.1	13.8	37.2	17.4	
	4th	101	38.8	91.8	15.5	14.6	43.4	13.6	13.4	36.1	15.8	
1976	1st quarter	101	42.6	89.2	14.6	13.1	38.9	13.3	12.9	39.8	19.0	
	2nd	99	46.3	107.5	12.8	12.8	40.4	11.5	12.4	34.3	20.9	
	3rd	99	36.9	89.7	10.0	12.0	34.7	13.2	12.8	40.7	17.2	
	4th	106	46.8	132.9	17.6	16.9	57.3	14.3	14.1	42.9	14.4	
1977	1st quarter p	108	57.1	140.7	17.1	15.7	51.6	13.7	13.4	48.9	14.7	
	2nd p	104	56.2	151.0	12.2	11.9	46.3	12.5	13.5	42.8	17.2	
1976	January	105	38.9	88.2	13.2	13.4	33.9	13.1	13.8	37.6		
	February	104	40.0	89.3	14.1	13.2	40.3	12.9	12.8	39.2		
	March	94	42.6	89.2	16 5	12.8	42.5	13.9	12.1	42.6		
	April	95	43.2	94.4	12.2	9.7	39.7	11.6	12.0	34.5		
	May	103	48.0	108.4	15.9	15.4	47.0	11.1	13.1	33.0		
	June	100	46.3	107.5	10.2	13.4	34.4	11.8	12.2	35.3		
	July	95	40.8	90.7	6.3	10.3	20.2	11.8	12.2	37.0		
	August	97	38.1	87.9	8.8	11.4	33.7	11.4	12.0	36.6		
	September	105	36 9	89.7	15.1	14.2	50.3	16.2	14.1	48.5		
	October	104	44.9	111.7	23.6	19.0	67.6	15.6	14.2	45.7		
	November	101	45.9	126.0	15.6	12.7	59.1	14.6	13.1	44.8		
	December	111	46.8	132.9	13.6	19.1	45.0	12.6	15.2	38.1		
1977	January p	107	51.3	133.7	16.3	17.3	42.5	11.8	13.0	41.7		
	February p	113	53.7	136.8	16.2	15.2	52.5	13.8	13.6	49.4		
	March p	106	57.1	140.7	18.9	14.6	59.6	15.5	13.6	55.7		
	April p	96	59.1	150.4	13.7	11.5	49.1	11.7	12.6	39.5		
	May p	112	61.2	160.6	15.5	14.4	55.2	13.4	15.1	44.9		
	June p	105	56.2	151.0	7.4	9.7	34.5	12.4	12.8*	44.1		

p Provisional.

* Based on early returns, seasonally adjusted deliveries in July are expected to be 12½ million pairs.

Metal-working machine tools: sales and orders in May and June

Statistics of manufacturers' sales and orders for metal-working tools up to and including June 1977 are shown in table 1. These monthly statistics will be published in the Business Monitor PM 332, and full details of the quarterly inquiry will be published in Business Monitor PQ 332.

The monthly estimates up to and including December 1976 have been adjusted to be consistent with the more comprehensive quarterly inquiry recently published, and the latest provisional estimates will be revised when the appropriate information becomes available. Net new orders and orders-on-hand have been adjusted to the same basis of coverage and valuation as sales.

Summary

Provisional statistics for the second quarter of 1977 are now available. They show that the overall level of sales, in current value terms, continue to reflect a sustained rate of total deliveries. The volume of total sales seasonally adjusted has changed little over the past year.

Total new orders secured have been rising steadily since the beginning of last year, with new business from the home markets making the greatest contribution. Export orders for the second quarter of 1977 showed a substantial fall and in volume terms are only a little above levels of a year ago.

With the inflow of total new orders in the three months to June, running 25 per cent above the level of sales, order books have continued to increase and total orders-on-hand at the end of June 1977 stood at £240 million.

Recent trends

The latest monthly figures now available show that, in current value terms, sales in the second quarter of 1977 have fallen by 8 per cent over the preceding quarter, with home and export sales lower by 6 and 11 per cent respectively. Too much should not be read into these set-backs, however, since most, if not all, of this fall is due to normal seasonal factors.

Total sales have averaged about £32 million per month in the second quarter of 1977, which is only slightly lower than the monthly rates of the first quarter but 16 per cent higher than the second quarter of 1976. Allowing for continued price increases, the trend over 12 months is one of no change in the volume of total sales.

Home sales for the second quarter of this year, at £58 million, although 6 per cent lower than the previous quarter, showed a marked increase of 22 per cent over the same period a year ago. Sales to the export market recorded a moderate increase of 7 per cent over a year ago.

The overall intake of new orders (net of cancellations) in the most recent three months of this year showed an easing back over the previous three months but an increase of 49 per cent over the same period a year ago. Within the total, new home orders rose sharply by 24 per cent over the previous quarter and 64 per cent over the same period in 1976. New orders from abroad, however, show a decrease of 33 per cent over the previous quarter although they increased by 24 per cent over the same period a year previously.

As the overall intake of new orders in the second quarter of 1977 has remained above the level of total deliveries, order books have continued to increase and were 11 per cent above the level of three months previously and 22 per cent above the level of a year ago. Home order books have increased by 20 per cent over the preceding quarter and by 30 per cent over the level of a year ago.

However, export orders-on-hand are still lagging behind with a moderate increase of 14 per cent over the previous year's level. In terms of current activity home orders-on-hand at the end of June were equal to about seven months' deliveries and export order books could sustain export sales for about eight months.

Included in table 2 is a specially-prepared estimate of the employment in the industry covered by this article, ie part of MLH 332 concerned primarily with metal-cutting and metal-forming machine tools but excluding welding. The estimates showed that for June, employment in the industry has levelled out at 50 100, unchanged since April.

Inquiries on the published series should be addressed to Department of Industry, Mechanical Engineering Statistics, Room 614, Dean Bradley House, 52 Horseferry Road, London SW1P 2AG, tel. 01-212 0651.

Table 1 Metal-working machine tools: orders and sales

£ million

	Sales			Orders outstanding[1]			New orders		
	Total	Home	Export	Total	Home	Export	Total	Home	Export
1970	218.6	137.3	81.3	159.5	86.8	72.7	213.9	130.8	83.1
1971	207.7	121.7	86.0	106.0	46.0	60.0	154.2	80.9	73.3
1972	184.7	111.6	73.1	113.3	55.7	57.6	192.0	121.3	70.7
1973	213.2	129.1	84.1	216.0	120.4	95.6	315.9	193.8	122.1
1974	254.4	149.9	104.5	312.9	164.1	148.8	347.9	191.9	156.0
1975	325.4	186.4	139.0	234.3	122.4	111.9	246.8	144.7	102.1
1976 r	367.4	210.2	147.2	197.6	105.7	91.9	325.7	198.8	126.9
1976									
1st qtr	95.1	50.6	44.5	197.8	98.7	99.1	63.1	31.7	31.4
2nd	82.8	47.6	35.2	195.1	101.3	93.8	80.6	50.7	29.9
3rd r	79.2	48.7	30.5	197.9	107.0	90.9	82.0	54.4	27.6
4th r	100.3	63.3	37.0	197.6	105.7	91.9	100.0	62.0	38.0
1977									
1st qtr p	104.9	62.3	42.6	215.6	110.1	105.5	122.9	66.7	56.2
2nd p	96.3	58.5	37.8	239.9	132.3	107.6	120.6	83.3	37.3
1976									
April	25.8	15.5	10.3	201.4	101.1	100.3	29.5	18.0	11.5
May	29.9	15.8	14.1	193.0	96.7	96.3	21.9	11.8	10.1
June	27.1	16.3	10.8	195.1	101.3	93.8	29.2	20.9	8.3
July r	26.2	15.4	10.8	193.7	103.0	90.7	24.8	17.1	7.7
August r	23.4	14.7	8.7	198.5	104.3	94.2	28.2	16.0	12.2
September r	29.6	18.6	11.0	197.9	107.0	90.9	29.0	21.3	7.7
October r	31.9	18.8	13.1	197.2	109.3	87.9	31.2	21.1	10.1
November r	33.0	22.6	10.4	198.1	108.1	90.0	33.9	21.4	12.5
December r	35.4	21.9	13.5	197.6	105.7	91.9	34.9	19.5	15.4
1977									
January p	37.3	21.2	16.1	200.2	104.1	96.1	39.9	19.6	20.3
February p	31.0	17.9	13.1	206.9	108.2	98.7	37.7	22.0	15.7
March p	36.6	23.2	13.4	215.6	110.1	105.5	45.3	25.1	20.2
April p	28.5	17.4	11.1	221.7	114.2	107.5	34.6	23.7	10.9
May p	35.6	22.0	13.6	229.8	125.0	104.8	43.7	33.2	10.5
June p	32.2	19.1	13.1	239.9	132.3	107.6	42.3	26.4	15.9
Three monthly totals:									
Apr to June 1977	96.3	58.5	37.8	239.9	132.3	107.6	120.6	83.3	37.3
Jan to Mar 1977	104.9	62.3	42.6	215.6	110.1	105.5	122.9	66.7	56.2
April to June 1976	82.8	47.6	35.2	195.1	101.3	93.8	80.6	50.7	29.9
Percentage change latest three months on:									
1 Previous 3 months	−8	−6	−11	+11	+20	+1	−1	+24	−33
2 A year earlier	+16	+22	+7	+22	+30	+14	+49	+64	+24

p Provisional. r Revised.

[1] The values for orders outstanding relate to the ends of the periods shown.

Due to rounding, constituent figures may not sum to their respective totals.

Table 2 Metal-working machine tools: employment

Thousands

1974		**1976**	
1st qtr	52.9	1st qtr p	49.6
2nd	53.2	2nd p	49.4
3rd	54.4	3rd p	49.5
4th	54.4	4th p	49.7
1975		**1977**	
1st qtr	54.0	1st qtr	50.0
2nd qtr	53.0	April	50.1
3rd qtr	52.2	May	50.1
4th p	50.6	June	50.1

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PQ 279.4	Formulated pesticides, etc for second quarter 1977
PQ 279.7	Photographic chemical materials for second quarter 1977
PQ 333.3	Compressors and fluid power equipment for first quarter 1977
PQ 339.3	Refrigerating machinery, space-heating, ventilating and air-conditioning equipment for first quarter 1977
PQ 349.1	Ball, roller, plain and other bearings for second quarter 1977
PQ 351	Photographic and document copying equipment for second quarter 1977
PQ 380	Wheeled tractors for second quarter 1977
PQ 399.10	Metallic closures for second quarter 1977
PQ 415	Jute for second quarter 1977
PQ 422.1	Household textiles and handkerchiefs for first quarter 1977
PQ 429.2	Miscellaneous textile industries for second quarter 1977
PQ 443	Women's and girls' tailored outerwear for first quarter 1977
PQ 445	Women's and girls' light outerwear, lingerie, infants' wear, etc for first quarter 1977
PQ 462	Pottery for second quarter 1977
PQ 469.1	Abrasives for second quarter 1977
PQ 480	Packaging products for first quarter 1977
PQ 482.2	Miscellaneous packaging products of paper and film for first quarter 1977
PQ 483	Manufactured stationery for second quarter 1977
PQ 484.1	Wallcoverings for second quarter 1977
PQ 603	Water supply for second quarter 1977

Monthly at £3.06 each post free

PM 33-36	Engineering (volume indices of sales and orders) for April 1977
PM 381	Cars and commercial vehicle production for July 1977
PM 471.1	Wood chipboard for July 1977
PM 481	Paper and paper making materials for July 1977
PM 491	Rubber for June 1977

SERVICE AND DISTRIBUTIVE SERIES
Monthly at £3.06 each per year post free:

SD 1	Food shops for July 1977
SD 2	Clothing and footwear for July 1977
SD 3	Durable goods shops for July 1977
SD 4	Miscellaneous non-food shops for July 1977
SD 6	Instalment credit business of finance houses for July 1977
SD 8	Instalment credit business of retailers for July 1977

OTHER MANUFACTURING INDUSTRIES
Monthly at £3.06 each per year post free:

M 1	Motor vehicle registrations for July 1977

Annual at £3.06

M 10	Overseas Trade Analysed in Terms of Industries for 1976

1973 Report on the Census of Production (price including postage shown in parentheses)

PA 216	Sugar	(67p)
PA 369.1	Electrical equipment for motor vehicles, cycles and aircraft	(92p)
PA 391	Hand tools and implements	(92p)
PA 396	Jewellery and precious metals	(67p)
PA 419	Carpets	(92p)
PA 423	Textile finishing	(92p)
PA 461.2	Building bricks and non-refractory goods	(92p)

Business Monitors in the production series and miscellaneous series, and certain monitors (nos. SD 1 and SD 6) in the service and distributive series, are normally available by annual subscriptions from Her Majesty's Stationery Office, PO Box 569, London SE1 9NH. Copies of specific issues (including back issues) can be ordered by post (payable in advance) from the Library at the Business Statistics Office, Newport, Gwent NPT 1XG (tel. 0633 56111, ext. 2973; telex 497121 – answer back BSONPT G) from which a complete list of the titles of Business Monitors is available on application. Back issues of the monthly and quarterly monitors cost 50p a copy post free. Please send payments for all orders below £5. The annual monitors are individually priced and the cost of these will be supplied on request. Exceptionally, copies can also be purchased over the counter at the Department of Trade's Statistics and Market Intelligence Library, Export House, 50 Ludgate Hill, London EC4H 7HU.

Index of retail prices for August

The index of retail prices for all items for 16 August 1977 was 184.7 (15 January 1974 = 100). This represents an increase of 0.5 per cent on July 1977 (183.8) and of 16.5 per cent on August 1976 (158.5).

The rise in the index in August was due to increases in prices over a wide range of goods and services, particularly clothing, household goods, cars, fresh fruit and other foods; to increases in television licence fees and rental charges; and to increases in passenger transport fares. These increases were partially offset by lower prices for petrol, potatoes and other fresh vegetables, and by a reduction in the level of telephone charges.

The movements for the main groups of the index are shown in table 2.

Inquiries: Watford 28500 ext. 630.

Table 2 Index of retail prices: commodity breakdown

	Indices (15 Jan 1974 = 100)		Percentage change over the month
	12 Jul 1977	16 Aug 1977	
All items	183.8	184.7	+0.5
All items excluding food	181.5	182.7	+0.7
Food	192.0	191.9	−0.1
Seasonal food	194.1	182.8	−5.8
Other food	191.8	193.8	+1.0
Alcoholic drink	184.6	185.7	+0.6
Tobacco	216.1	217.6	+0.7
Housing	163.3	164.3	+0.6
Fuel and light	216.6	217.3	+0.3
Durable household goods	166.8	169.1	+1.4
Clothing and footwear	157.4	160.4	+1.9
Transport and vehicles	193.8	192.9	−0.5
Miscellaneous goods	189.9	190.9	+0.5
Services	172.9	174.4	+0.9
Meals out	186.4	188.7	+1.2

Table 1 Index of retail prices

	All items				All items except seasonal foods		
	Index 15 January 1974 = 100	Percentage change over 1 month	6 months	12 months	Index 15 January 1974 = 100	Percentage change over 1 month	6 months
1977							
March	175.8	+1.0	+9.5	+16.7	174.3	+1.0	+8.9
April	180.3	+2.6	+10.3	+17.5	178.7	+2.5	+9.8
May	181.7	+0.8	+9.6	+17.1	180.5	+1.0	+9.5
June	183.6	+1.0	+9.3	+17.7	182.4	+1.1	+9.4
July	183.8	+0.1	+6.6	+17.6	183.5	+0.6	+7.4
August	184.7	+0.5	+6.1	+16.5	184.9	+0.8	+7.2

Engineering sales and orders up to June

SIC orders VII, VIII and IX

Provisional trend estimates and seasonally adjusted volume indices of engineering sales and orders up to June show that the continuing weakness of the home market was only partially offset by some improvement in export markets. Overall, new orders and sales have fallen back slightly during the first half of this year, losing some of the ground gained in 1976. The volume of orders received has been much the same as the level of sales during the last few months, so total order books have been static.

New home orders for the combined engineering industries (mechanical, instrument and electrical) have failed to maintain the improvement recorded last year. The inflow fell by 6 per cent during the second quarter, according to trend estimates. This trend was common to both the main sectors, with only the small instrument engineering industry showing an increase. Also widespread was the downturn in domestic sales, 4 per cent for the combined industries, which took them to a new trough, lower than any level recorded since 1970. However, new orders remained below sales so home order books fell by another 1 per cent during the second quarter. They have declined continuously for over three years, but the rate of decline has slowed recently.

In contrast to this, new contracts from abroad, which increased steadily throughout the first three quarters of 1976 but were subsequently checked around the turn of the year, showed a further rise in recent months. However, much of the growth of 4½ per cent during the second quarter was due to one large order in the mechanical engineering industry. There was some improvement in export sales in all three sectors, the increase in trend for combined engineering being 3 per cent; this follows a period of several months when sales

were flat. Export order books lengthened quite considerably during the latter half of 1976, reflecting the large intake of new export orders for electrical engineering goods; since then improvement has been slower, with a rise of 1½ per cent during the second quarter.

As a result of these opposing movements in home and export markets, total orders received fell by 2½ per cent and sales by 1½ per cent during the second quarter, whilst order books were unchanged.

The revised figures published in this table are based on the monthly engineering inquiry relating to June 1977. The response rate of 80 per cent to the inquiry for June is judged sufficient to justify publication of provisional indices for this month. Taking into account late returns now received from March, April and May response rates for these months were 94, 91 and 90 per cent respectively.

When using the volume index numbers and trends shown in the accompanying table, it should be borne in mind that, when price increases are large, the various problems associated with revaluation of the values of engineering sales and orders to constant prices become more acute. Because of these difficulties the relative accuracy of the volume estimates is likely to have been reduced in recent months and studies are currently in hand to ascertain the possible directions and magnitudes of any biasses, which may lead to revisions in due course.

An expanded commentary, together with additional tables, is given in Business Monitor PM 33-36, Engineering (volume indices of sales and orders), obtainable from HMSO, PO Box 569, London SE1 9NH, post free for a subscription of £3.06 per annum. Separate commentaries and volume indices are given for sales, orders-on-hand and net new orders for total, home and export markets, for mechanical, instrument and electrical engineering (SIC orders VII, VIII and IX respectively). **Inquiries:** Department of Industry, Room 618, Dean Bradley House, 52 Horseferry Road, London SW1P 2AG, tel. 01-212 5770.

Do you use statistics?

The Government Statistical Service (GSS) prepares a wide range of reliable and detailed figures on the United Kingdom. It is usually worth checking to see if what you want is available from them. You can see many government statistical publications at your local public library, buy them from HMSO or refer to the comprehensive collection held at the Statistics and Market Intelligence Library, Export House, 50 Ludgate Hill, London EC4N 7HU (tel. 01-248 5757 ext. 368).

A free pamphlet, *Government Statistics – a brief guide to sources*, gives up-to-date contact points in Departments for further information. You can obtain copies from regional offices of the Department of Industry or by writing to the Central Statistical Office Press and Information Service, Great George Street, London SW1P 3AQ.

Index numbers for the combined engineering industries (SIC orders VII, VIII and IX)[1]

Volume index numbers: Orders-on-hand, December 1970 unadjusted = 100
Net new orders and sales, 1970 average monthly sales = 100

	Total			Home			Export		
	Orders-on-hand (end of period)	Net new orders	Sales	Orders-on-hand (end of period)	Net new orders	Sales	Orders-on-hand (end of period)	Net new orders	Sales
Trend estimates									
1975									
July	110	91	107	105	86	104	122	103	115
August	108	90	106	102	85	103	120	101	114
September	106	88	105	99	84	102	118	99	113
October	103	87	104	96	83	101	116	96	112
November	101	87	103	94	83	100	114	95	112
December	99	87	103	92	84	99	112	94	112
1976									
January	97	88	103	90	86	98	110	94	114
February	95	90	103	89	88	98	108	96	116
March	93	93	104	87	89	99	106	101	117
April	92	95	105	86	90	100	105	106	118
May	91	97	105	84	90	100	104	113	119
June	90	100	105	83	91	100	105	121	118
July	90	103	105	82	93	100	106	128	118
August	90	105	105	81	94	100	108	133	117
September	90	108	105	81	95	100	110	137	117
October	91	108	106	80	97	101	113	138	118
November	91	108	106	79	97	101	114	135	118
December	91	108	106	78	98	101	116	132	118
1977									
January	91	107	105	78	98	100	117	128	118
February	91	106	105	77	98	99	117	126	118
March	90	105	104	77	98	98	118	124	119
April	90	105	104	77	96	97	118	125	120
May	90	104	103	76	94	96	119	127	121
June	91	103	103	76	92	95	119	130	122
Percentage change[2] Mar-June 1977	—	−2.5	−1.5	−1.0	−6.0	−4.0	+1.5	+4.5	+3.0
Seasonally adjusted									
1969	101	100	97	102	99	99	100	102	91
1970	100	99	100	100	99	100	100	100	100
1971	93	97	101	95	98	101	89	93	102
1972	99	103	101	103	108	105	90	91	92
1973	133	134	113	134	136	117	131	131	102
1974	128	109	111	123	105	111	139	118	113
1975	99	90	108	91	87	105	113	98	115
1976	91	100	105	78	92	100	117	119	117
1975									
1st quarter	119	89	112	114	89	110	128	89	118
2nd	113	95	109	108	92	106	124	102	115
3rd	106	90	107	100	86	103	118	101	114
4th	99	85	103	91	80	100	113	98	112
1976									
1st quarter	94	92	103	88	90	98	106	96	116
2nd	90	95	106	83	90	101	103	107	119
3rd	90	107	106	81	96	101	109	133	118
4th	91	106	105	78	92	99	117	141	118
1977									
1st quarter	90	108	105	77	102	100	118	124	117
2nd	91	103	103	76	92	95	120	129	122
1975									
July	109	84	109	104	77	105	121	99	120
August	108	93	102	102	84	99	121	115	110
September	106	94	109	100	96	107	118	88	113
October	103	84	107	96	79	104	116	96	112
November	101	85	103	94	83	98	113	89	114
December	99	87	100	91	77	96	113	110	110
1976									
January	96	84	102	89	84	98	109	82	114
February	95	95	101	89	94	98	108	97	113
March	94	97	106	88	92	100	106	109	120
April	92	92	108	86	89	103	105	100	120
May	90	94	107	84	89	102	103	104	120
June	90	99	102	83	91	97	103	118	116
July	90	105	104	82	84	97	108	157	120
August	90	103	104	81	95	100	109	122	114
September	90	112	109	81	109	105	109	119	119
October	91	107	105	80	91	100	112	146	117
November	92	113	106	80	98	99	116	149	120
December	91	98	105	78	87	99	117	126	117
1977									
January	90	110	105	77	101	100	117	129	118
February	91	111	105	78	109	101	117	115	116
March	90	104	106	77	95	100	118	126	118
April	90	101	103	77	95	96	117	115	121
May	91	107	102	76	91	94	120	146	121
June	91	100	103	76	90	94	120	126	124
Jan-Mar 77 (av.)	90	108	105	77	102	100	118	124	117
April-June 1977 (av.)	91	103	103	76	92	95	120	129	122
Percentage change[2]	—	−5.0	−2.5	−1.5	−10.0	−5.5	+2.0	+4.0	+4.0

[1] All figures are provisional. [2] For orders-on-hand, the percentage changes compare the level at the end of the latest period shown with the corresponding level for the earlier period. The percentage changes have been based on the unrounded values and are given to the nearest half percentage point.

Finance for technology

The National Research Development Corporation provides financial and other support for technological developments of potential commercial importance. NRDC promotes the adoption by industry of new products and processes invented in government laboratories, universities and elsewhere. NRDC is participating in joint ventures with industry on an increasing scale. By supporting projects NRDC makes it possible for individual firms or groups of companies to undertake and accelerate the development and production of new products and processes of national importance. The corporation welcomes submissions in confidence from firms who have promising new projects to launch in any branch of industry or commerce. The conditions for its considering proposals of this kind are set out in a leaflet which may be obtained on application, either by writing to the National Research Development Corporation, Kingsgate House, 66-74 Victoria Street, London SW1E 6SL, or by telephoning 01-828 3400.

Registrations of British, community and foreign films

The following are details of films registered by the Department of Trade under the Films Acts 1960 to 1970, as amended by the European Communities Act 1972, during the week ended Friday, 16 September 1977.

BR/E indicates that the film is a British quota film, EC that the film is a quota film. The date which forms part of the registration number of each is the date on which quota life of the film expires.

Title of film	Registered no.	Playing time minutes	Date of registration	Registered in the name of	Maker's name
BRITISH					
Born To Run	BR/E 39303/18/9/82	77	16 September	Walt Disney Productions Ltd	Walt Disney Productions Ltd
Movetone News 2519	BR/E 39186/18/9/82	8	16 September	British Movietonews Ltd	British Movietonews Ltd
FOREIGN					
New York, New York	F 39302	137	13 September	United Artists Corporation Ltd	Chartoff-Winkler Productions Inc., California

AMENDMENTS TO THE REGISTER

The playing time of the film 'The Man Who Would Be King' BR/E 38384/20/12/80 registered on 17 December 1975 has been amended to 111 minutes.

The title of the film 'The Girl From Hong Kong' EC 37342/10/3/79 registered on 5 March 1974 has been amended to 'Circle of Fear' and the playing time to 91 minutes.

CORRECTION TO THE REGISTER

The registration number of the film 'Dangerous Game' registered on 6 July 1977 has been corrected to BR/E 39239/10/7/82.

Index to statistics published regularly in 'Trade and Industry'

(a) annually (m) monthly (q) quarterly

Air transport: trade by air (a) 1 Jul 77
Balance of payments
current account (m) This week
overseas royalties 12 Aug 77
trends in invisibles 29 Apr 77
see also Overseas trade of the UK
Business names and limited partnerships (a) 18 Feb 77
Capital expenditure:
manufacturing, distributive and service industries (q) 2 Sept 77
by regions 18 Feb 77
Catering trades turnover (q) 26 Aug 77
Census of production (a) 28 Jan 77
Check trading (a) 12 Aug 77
Chemicals industry activity (q) 1 Jul 77
Companies
acquisitions and mergers (q) 12 Aug 77
insolvencies (q) 5 Aug 77
liquidity (q) 9 Sept 77
new registrations:
Gt. Britain (m) This week
N. Ireland (m) 16 Sept 77
rate of return on capital (a) 16 Sept 77
structure of company financing 4 Feb 77
Construction work overseas (a) 15 Oct 76
EEC economic indicators
see Foreign trade
Energy trends (m) 2 Sept 77
Engineering industries:
production indices (m)
sales and orders (m) This week
Film industry
British Film Fund Agency returns (m) 9 Sept 77
cinema admissions and takings (m) 16 Sept 77
exhibitors' quota returns (a) 6 May 77
overseas payments and earnings (a) 26 Aug 77
registrations of films (a) 4 Feb 77
Food
consumption levels (6m) 25 Mar 77
household consumption (q) 1 Jul 77
Footwear industry:
production, orders and deliveries (m) This week
Foreign trade: industrial countries' economic indicators (m) 2 Sept 77
quarterly analysis (q) 2 Sept 77
see also Overseas trade of the UK
Hire purchase business (m) 9 Sept 77
Industrial production
index numbers (m) This week
Scotland (q) 9 Sept 77
Wales (q) 29 Jul 77
Insurance companies:
investments and assets (a) 20 Aug 76
Investment
book values of overseas direct investments (every 3 years) 25 Feb 77
industry's investment intentions (3 times a year) 10 Jun 77
investment and earnings overseas (a) 5 Aug 77
Made-up clothing:
orders and deliveries (m) This week
Man-made fibres
deliveries (q) 10 Jun 77
production (m) 12 Aug 77
production: quarterly analysis (q) 10 Jun 77
Metal-working machine tools (m) This week
Motor industry
car and commercial vehicle production (m) 2 Sept 77
estimated figures (m) 16 Sept 77
motor trade turnover (q) 26 Aug 77
Office development permits (q) 2 Sept 77
Official reserves (m) 9 Sept 77
Overseas trade of the UK
direct exporters and credit terms (a) 12 Aug 77
analysis of trends (q) 2 Sept 77
backrun (a) 11 Mar 77
export prospects (q) 16 Sept 77
invoicing in foreign currencies 22 Apr 77
see also Balance of payments
Pension funds: investments and assets (a) 20 Aug 76
Regional development grants (q) 12 Aug 77
Research and development expenditure 24 Jun 77 and 1 Jul 77
Retail prices index (m) This week
Retail trades
sales (m) 9 Sept 77
provisional figures (m) 16 Sept 77
stocks (m) This week
Royalties: overseas transactions (a) 12 Aug 77
Selective assistance
section 7 (m) 26 Aug 77
section 7 £10,000 or more (q) This week
section 8 (q) This week
Shipping: nationality of vessels in UK seaborne trade (a) 9 Sept 77
Steel:
consumption and stocks (q) 1 Apr 77
Stocks
manufacturers' and distributors' (q) 2 Sept 77
manufacturers' (m) 9 Sept 77
retail (m) This week
Television: overseas payments and earnings (a) 26 Aug 77
Textiles
activity in the industry (q) 1 Jul 77
carpet sales (m) 22 Jul 77
cotton industry production (m) 26 Aug 77
hosiery production (m) 12 Aug 77
wholesale houses' sales and stocks (m) This week
wool exports (q) 26 Aug 77
wool output (m) 26 Aug 77
Tourism
overseas travel and tourism (a) 29 Jul 77
overseas travel and tourism (q) 29 Jul 77
Wholesale prices
average prices of selected commodities (a) 13 May 77
index numbers (m) This week

Organisational information

Commercial representation guide 8 Apr 77
Customs notices of interest to exporters 1 Oct 76
ECGD local offices 12 Aug 77
ECGD lines of credit 1 Apr 77
Government statistics guide 15 Jul 77
Guide to departments 2 Sept 77
OTAR contact points This week
Release dates of economic statistics 26 Aug 77
Trade promotions guide 29 Jul 77

Government statistics

For more information, see the Guide to government statistics, published with Trade and Industry, 15 July 1977

Departmental responsibilities and contact points

Central Statistical Office
Great George Street, London SW1P 3AQ
01-233 followed by extension
National income and expenditure, balance of payments, index of industrial production, financial statistics, input/output statistics, development of social statistics, regional statistics ext **6135/6193**
Survey Control Unit inquiries only ext **7341**

Industry, trade, prices

Departments of Industry, Trade and Prices and Consumer Protection

Business Statistics Office
Cardiff Road, Newport, Gwent NPT 1XG
Newport 56111
General inquiries ext **2973**
Production statistics:
- Annual production statistics ext **2455**
- Quarterly and monthly production inquiries exts **2337/2322**
- Purchases inquiry ext **2369**
- Classified List of Businesses exts **2557/2751**

Distribution statistics:
- Census of distribution 1971 ext **2000**
- Annual inquiry into distributive and service trades, capital expenditure and stocks ext **2113**

Other offices
1 Victoria Street, London SW1H 0ET
01-215 followed by extension
Wholesale price indices exts **3351. 3544**
Capital expenditure and stocks, and investment intentions of private industry:
- Manufacturing ext **3176**
- Distributive and service trades ext **3345**

Retail trades turnover ext **3705**
Motor and catering trades turnover ext **3177**
Hire-purchase and other instalment credit ext **3162**
Aerospace ext **4052**
Companies:
- Acquisitions and mergers, liquidity, insolvencies ext **5538**
- Analysis of accounts ext **3132**

Insurance, private sector pensions funds ext **3162**
Overseas trade:
- Visible ext **3131**
- Invisible ext **5176**

Overseas direct investment and earnings ext **3135**
Economic indicators:
- Home ext **3453**
- Industrial countries ext **3442**

Abell House, John Islip Street, London SW1P 4LN **01-211** followed by extension
Scientifically qualified manpower ext **4496**
R&D expenditure by industry ext **3631**

Cromwell House, Dean Stanley Street, London SW1P 3HY **01-212** followed by extension
Shipping ext **6730**
Tourism ext **0616**

Millbank Tower, Millbank, London SW1P 4QU
01-211 followed by extension
Industrial development certificates ext **3324**
Distribution of industry ext **6073**

Dean Bradley House, 52 Horseferry Road, London SW1P 2AG **01-212** followed by extension
Manufacturing industries – production, sales, orders:
- Steel and shipbuilding ext **5544**
- Engineering ext **6044**
- Non-ferrous Metals ext **6532**
- Motor vehicles ext **0788**
- Chemicals ext **6937**
- Textiles, clothing, footwear, leather, man-made fibres ext **6210**

Other industries ext **6331**

Export House, 50 Ludgate Hill, London EC4M 7HU **01-248 5757 Telex: 886143 DTI Export Ldn**
All foreign and Commonwealth statistics ext **337**

Statistics and Market Intelligence Library ext **368**
Provides up-to-date and comprehensive trade statistics for all countries, and general statistical publications from all over the world. Overseas directories are also held. Reading room and copying facilities are available.

Energy

Department of Energy
Thames House South, Millbank, London SW1P 4QJ **01-211** followed by extension
Fuel and energy statistics ext **4292**

Customs and Excise

Customs and Excise
King's Beam House, Mark Lane, London EC3 7HE **01-626 1515**
Statistics related to all indirect taxes administered by the Department ext **2024**
Bill of Entry Service, Statistical Office, Portcullis House, 27 Victoria Avenue, Southend-on-Sea SS2 6AL
Southend 49421
United Kingdom external trade statistics ext **310**

Employment

Department of Employment
Orphanage Road, Watford, Herts WD1 1PJ
Watford 28500
Employment, unemployment, vacancies ext **403**
Earnings, wage rates, hours of work ext **651**
New earnings survey ext **500**
Stoppages of work due to industrial disputes ext **673**
Employers' labour costs ext **526**
Index of retail prices ext **630**

26 King Street, London SW1Y 6RB
01-214 8627
Family Expenditure Survey

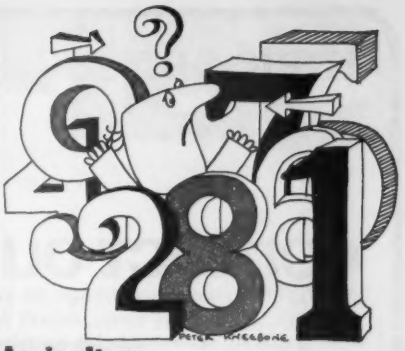
Environment, transport

Departments of the Environment and Transport
St Christopher House, Southwark Street, London SE1 0TE **01-928 7999**
Roads ext **3045**
Road traffic exts **2198, 2629**

2 Marsham Street, London SW1P 3EP
01-212 followed by extension
Passenger traffic, road vehicles, public road passenger transport ext **5533**
Inland freight transport, railways ext **7513**
Road accidents ext **7452**
Traffic of seaports ext **8323**
Road goods transport ext **8297**
Building materials exts **7147, 8411**
Construction industries ext **7142**
Planning and land use ext **4113**
Local government financial statistics ext **4627**
Population projections exts **8558, 8563**
Household projections ext **8555**
Housing ext **8551**

Taxation

Board of Inland Revenue
Somerset House, Strand, London WC2R 1LB
01-438 6649
Statistics of direct taxes, corporate income, surveys of personal incomes, personal wealth and conveyancing.



Agriculture

Ministry of Agriculture, Fisheries and Food
Whitehall Place, London SW1A 2HH
01-839 7711
General inquiries exts **7000, 7024**
National expenditure estimates on food ext **477**
Food consumption estimates exts **388, 479**
Agricultural incomes, etc exts **292, 296, 297, 565**
Agricultural and food statistics for overseas countries ext **544**
Market prices (livestock, dairy products, etc) ext **7058**

Great Westminster House, Horseferry Road, London SW1P 2AE **01-216** followed by extension
Commodity production statistics ext **7501**
Market prices (horticulture) ext **6711**
Fisheries ext **6143**

49–53 Parliament Street, London SW1A 2NH
01-233 followed by extension
Agricultural rents, land prices, etc ext **5454**

Government Buildings, Tolcarne Drive, Pinner, Middlesex HA5 2DT **01-868 7161**
Agricultural prices indices ext **35**
Wholesale price index (manufactured food and soft drinks) ext **108**
National food survey: household food consumption and expenditure ext **44**

Government Buildings, Epsom Road, Guildford GU1 2LD **Guildford 68121**
Agricultural censuses and surveys ext **518**

Population

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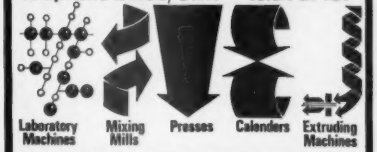

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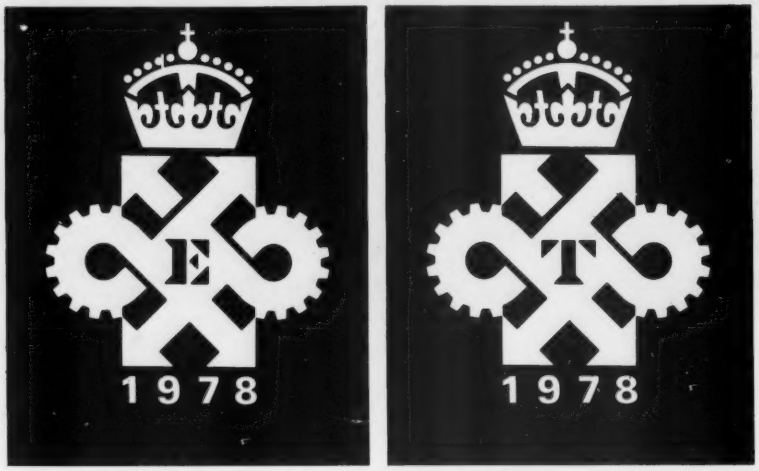

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